

QUINN EMANUEL URQUHART & SULLIVAN, LLP

Charles K. Verhoeven (Bar No. 170151)
charlesverhoeven@quinnemanuel.com

David A. Perlson (Bar No. 209502)
davidperlson@quinnemanuel.com

50 California Street, 22nd Floor
San Francisco, California 94111

Telephone: (415) 875-6600
Facsimile: (415) 875-6700

Kevin P.B. Johnson (Bar No. 177129)

kevinjohnson@quinnemanuel.com

Victoria F. Maroulis (Bar No. 202603)

victoriamaroulis@quinnemanuel.com

555 Twin Dolphin Drive, 5th Floor

Redwood Shores, California 94065-2139

Telephone: (650) 801-5000

Facsimile: (650) 801-5100

Attorneys for Samsung Electronics Co., Ltd.,
Samsung Electronics America, Inc., and Samsung
Research America, Inc.

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN FRANCISCO DIVISION

HUAWEI TECHNOLOGIES, CO., LTD., et al.,

Plaintiffs,

v.

SAMSUNG ELECTRONICS CO., LTD., et al.,

Defendants.

CASE NO. 16-cv-02787-WHO

**SAMSUNG ANSWER TO HUAWEI
COMPLAINT FOR BREACH OF
CONTRACT, DECLARATORY
JUDGMENT, AND PATENT
INFRINGEMENT AND SAMSUNG
COUNTERCLAIMS**

JURY TRIAL DEMANDED

PUBLIC REDACTED VERSION

SAMSUNG ELECTRONICS CO., LTD. &
SAMSUNG ELECTRONICS AMERICA, INC.

Counterclaim-Plaintiffs,

v.

HUAWEI TECHNOLOGIES, CO., LTD,
HUAWEI DEVICE USA, INC., HUAWEI
TECHNOLOGIES USA, INC., & HISILICON
TECHNOLOGIES CO., LTD.

Counterclaim-Defendants.

1 Defendants Samsung Electronics Co., Ltd. (“SEC”), Samsung Electronics America, Inc.
2 (“SEA”), and Samsung Research America, Inc. (“SRA”) (collectively, “Samsung” or
3 “Defendants”) hereby submit this Answer, Affirmative Defenses, and Counterclaims in response
4 to Plaintiffs Huawei Technologies, Co., Ltd, Huawei Device USA, Inc., and Huawei Technologies
5 USA, Inc.’s (“Huawei” or “Plaintiffs”) Complaint for Patent Infringement (the “Complaint”).
6 Samsung states as follows:

7 **INTRODUCTORY STATEMENT**

8 Huawei improperly seeks to force Samsung to enter into a global cross license for standard
9 essential patents (“SEPs”) on terms and conditions that grossly exceed the FRAND terms and
10 conditions that Huawei concedes must govern such a license. Huawei asks this Court to: (a)
11 provide an advisory opinion as to the proper terms and conditions for a worldwide cross-license
12 for the parties’ declared essential patent portfolios, which Huawei would then apparently have a
13 unilateral, nonbinding “right” to accept or reject; and (b) enjoin Samsung from requesting
14 injunctive relief against Huawei based on Samsung’s own declared essential patents. But Huawei
15 fails to disclose that it simultaneously filed numerous patent infringement lawsuits seeking only
16 injunctive relief against Samsung in its home forum of China. Huawei also fails to disclose that
17 those injunction suits are based on Huawei’s own declared essential patents—in some cases
18 counterparts to those asserted here—and are likely to be resolved long before the present action
19 concludes. Thus, Huawei is simultaneously seeking injunctions on a fast track on numerous
20 declared essential patents in China, while asking this Court to enter a declaratory judgment that
21 bars Samsung from seeking the same relief.

22 Although Huawei pays lip service to its FRAND obligations and the generally accepted
23 principle that FRAND terms and conditions ought to be entered into freely as a result of true
24 bilateral licensing negotiations, and independent of any threat of injunctions, Huawei intends to
25 use the leverage that its injunction requests provide to exact exorbitant royalties from Samsung.
26 As numerous courts, regulatory bodies, and commentators have concluded, and Huawei itself has
27 asserted, this use of injunction threats to obtain excessive non-FRAND royalties is a classic
28 example of patent “hold-up” and a misuse of the monopoly power that Huawei acquired when its

1 patented technology was allegedly adopted into the 3GPP 3G and 4G telecommunications
2 standards.

3 Since 2011, Samsung has attempted in good faith to negotiate an appropriate cross-license
4 to the companies' respective declared essential 3G and 4G cellular standards patents. [REDACTED]

5 [REDACTED]
6 [REDACTED]
7 [REDACTED]
8 [REDACTED]
9 [REDACTED]
10 [REDACTED]
11 [REDACTED] Ultimately, Huawei [REDACTED] and chose
12 to simultaneously file multiple injunction cases in China, as well as this action, on its FRAND-
13 encumbered patents. Although Huawei could have sought FRAND damages in the Chinese
14 actions, the only relief it seeks there are injunctions against the manufacture, sale, and offer for
15 sale, of Samsung mobile devices, including Samsung smartphones that are sold in this country and
16 around the world.

17 Huawei's efforts to obtain injunctive relief in China (while simultaneously invoking
18 Samsung's FRAND obligations here) threaten to interrupt Samsung's ability to supply
19 smartphones in the United States and around the world. These acts are neither fair nor reasonable.
20 If any one of Huawei's Chinese SEP injunction cases is successful, Huawei will pose a credible
21 threat to shut down a significant portion of Samsung's worldwide production of smartphones long
22 before any FRAND cross-license terms can be determined in this action. These tactics are
23 unmistakably intended to provide unfair leverage and to allow Huawei to extract licensing terms
24 from Samsung that exceed the FRAND terms to which Huawei might otherwise be entitled. In
25 order to defend itself and its customers, Samsung has asserted its own patents in China, and it also
26 seeks a judgment that Huawei infringes certain of Samsung's patents here. Huawei's improper
27 actions not only harm Samsung, the carriers who offer Samsung's phones, and customers, but also
28 U.S. competition as a whole in violation of the antitrust laws. Samsung will vigorously contest

1 Huawei's improper litigation tactics, which are inconsistent with good faith negotiations,
 2 Huawei's binding obligations, and applicable U.S. law.

3 **RESPONSES TO SPECIFIC ALLEGATIONS OF THE COMPLAINT**

4 **NATURE OF THE ACTION¹**

5 1. Samsung admits that the LTE standard is developed by 3GPP and implemented in
 6 the United States. Samsung admits that SEC is a member of ETSI, that SEC has declared certain
 7 patents to be potentially essential to ETSI/3GPP mobile standards ("standards-essential patents"),
 8 and that these SEPs are powerful patents given the need for all implementers to practice them in
 9 order to make, use, or sell standard-compliant products. Samsung has at all times been prepared to
 10 license its standards-essential patents on terms and conditions that are fair, reasonable, and non-
 11 discriminatory ("FRAND") in accordance with the obligations it undertook, including reciprocity.
 12 Samsung admits Huawei has made binding commitments to ETSI to license any and all of
 13 Huawei's standards-essential patents on FRAND terms and conditions. Samsung denies the
 14 remaining allegations of paragraph 1 of the Complaint.

15 2. Samsung admits that Huawei's complaint alleges claims of patent infringement.
 16 Samsung denies the remaining allegations in paragraph 2.

17 **THE PARTIES**

18 3. Samsung is without knowledge or information sufficient to form a belief as to the
 19 truth of the allegations of paragraph 3 and therefore denies the same.

20 4. Samsung is without knowledge or information sufficient to form a belief as to the
 21 truth of the allegations of paragraph 4 and therefore denies the same.

22 5. Samsung is without knowledge or information sufficient to form a belief as to the
 23 truth of the allegations of paragraph 5 and therefore denies the same.

24 6. Samsung admits that Samsung Electronics Co., Ltd. ("SEC") is a Korean company
 25 with its principal place of business in Suwon, South Korea. Samsung asserts that, to the extent
 26 _____

27 ¹ Samsung adopts Huawei's headers in the Complaint for ease of understanding. Samsung's
 28 adoption of those headers should not be construed as an admission of any allegations.

1 that allegations in paragraph 6 purport to describe or quote one or more documents, those
2 documents are the best source of their full content and context. Samsung denies the allegations to
3 the extent they do not accurately represent the documents' full content and context. Samsung
4 denies the remaining allegations in paragraph 6.

5 7. Samsung admits that Samsung Electronics America, Inc. ("SEA") is a wholly-
6 owned subsidiary of SEC. Samsung denies the remaining allegations in paragraph 7.

7 8. Samsung admits that SEA is a New York corporation with its principal place of
8 business in Ridgefield Park, New Jersey, and is a wholly-owned subsidiary of SEC. SEA operates
9 in an office located at 665 Clyde Avenue, Mountain View, California. SEA imports into the
10 United States and sells in the United States smartphones that operate on cellular networks in the
11 United States. Samsung denies the remaining allegations in paragraph 8.

12 9. Samsung admits that Samsung Research America, Inc. ("SRA") is a California
13 corporation with its principal place of business in Mountain View, California, and is a wholly-
14 owned subsidiary of SEA. SRA operates in an office located at 665 Clyde Avenue in Mountain
15 View, California. Samsung asserts that, to the extent that allegations in paragraph 9 purport to
16 describe or quote one or more documents, those documents are the best source of their full content
17 and context. Samsung denies the allegations to the extent they do not accurately represent the
18 documents' full content and context. Except as expressly admitted, Samsung denies the remaining
19 allegations of paragraph 9.

20 10. Samsung admits that SEA and SRA have submitted comments to the Federal
21 Communications Commission on issues regarding telecommunications standards. Samsung
22 asserts that, to the extent that allegations in paragraph 10 purport to describe or quote one or more
23 documents, those documents are the best source of their full content and context. Samsung denies
24 the allegations to the extent they do not accurately represent the documents' full content and
25 context. Samsung denies the remaining allegations of paragraph 10.

26 **JURISDICTION, VENUE, AND INTRADISTRICT ASSIGNMENT**

27 11. Samsung admits that the Complaint purports to allege claims over which this Court
28 has jurisdiction under 28 U.S.C. §§ 2201, 2202, 1331, 1332, 1338(a), and 1367, and that this

1 action purports to arise under the federal Patent Act, 35 U.S.C. § 1 *et. seq.* Except as expressly
 2 admitted, Samsung denies the remaining allegations of paragraph 11 of the Complaint.

3 12. Samsung admits that the Complaint purports to allege claims over which this Court
 4 has subject matter jurisdiction under 28 U.S.C. 1332 and 1367. Except as expressly admitted,
 5 Samsung denies the remaining allegations of paragraph 12 of the Complaint

6 13. Samsung admits that the Complaint purports to allege claims over which this Court
 7 has subject matter jurisdiction under 28 U.S.C. §§ 2201, 2202, 1332 and 1367. Except as
 8 expressly admitted, Samsung denies the remaining allegations of paragraph 13 of the Complaint.

9 14. Samsung admits that the Complaint purports to allege claims over which this Court
 10 has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a). Except as expressly
 11 admitted, Samsung denies the remaining allegations of paragraph 14 of the Complaint.

12 15. For purposes of this action only, Samsung will not challenge personal jurisdiction.
 13 Samsung admits that SEA and SRA have designated agents for service of process in California.
 14 Except as expressly admitted, Samsung denies the remaining allegations of paragraph 15.

15 16. Samsung admits, for purposes of this action only, that venue is proper in this
 16 District. Samsung admits that SRA and SEA have offices in this District. This case has been
 17 assigned to the San Francisco Division, United States District Court for the Northern District of
 18 California. Except as expressly admitted, Samsung denies the remaining allegations of paragraph
 19 16.

20 **FACTUAL BACKGROUND**

21 **A. Huawei's Alleged Innovation and Patented Technology**

22 17. Samsung is without knowledge or information sufficient to form a belief as to the
 23 truth of the allegations of paragraph 17 and therefore denies the same.

24 18. Samsung is without knowledge or information sufficient to form a belief as to the
 25 truth of the allegations of paragraph 18 and therefore denies the same.

26 19. Samsung is without knowledge or information sufficient to form a belief as to the
 27 truth of the allegations of paragraph 19 and therefore denies the same.

28 20. Samsung denies the allegations of paragraph 20.

B. Cellular Standards and the FRAND Commitment

21. Samsung admits that 3GPP functions as a standard-setting organization for certain UMTS and LTE standards. Samsung admits that LTE technology seeks to increase capacity and speed, represents one of the latest advances in wireless telecommunications technology, and contributes to technical innovations that have enhanced user experience. Samsung admits that LTE mobile devices and infrastructure equipment are commonly backwards compatible with older technologies. Except as otherwise admitted, Samsung denies the remaining allegations of paragraph 21.

22. Samsung admits that cellular standards enable interoperability. Samsung admits that mobile devices must comply with one or more cellular standards to interoperate and be commercially viable. Samsung is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations of paragraph 22 and therefore denies the same.

23. Samsung admits that 3GPP, in part through its technical committees, maintains and approves standards, and that 3GPP technical specifications are incorporated by ETSI into relevant standards. Samsung is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations of paragraph 23 and therefore denies the same.

24. Samsung admits that, once a particular technology is adopted into a standard, manufacturers must integrate the technology into their products to comply with the standard. Samsung admits that ETSI has policies that seek to ensure that certain patents will be available to license on FRAND terms and conditions. Samsung admits ETSI's IPR Policy requires members to use reasonable endeavors to disclose patents that may be or may become "essential" to comply with a standard. Samsung admits that ETSI's IPR Policy requires members to declare whether they are prepared to grant licenses on FRAND terms and conditions to their declared patents. Samsung is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations of paragraph 24 and therefore denies the same.

25. Samsung admits that ETSI's IPR Policy includes a definition for the term "essential." To the extent that the allegations in paragraph 25 purport to describe or quote one or more ETSI documents, Samsung avers that those documents are the best source of their full

1 context and content. Samsung denies the allegations of paragraph 25 to the extent they do not
2 accurately represent the documents. Except as expressly admitted, Samsung denies the remaining
3 allegations of paragraph 25.

4 26. Samsung admits that ETSI members have the opportunity to state they are prepared
5 to grant licenses on terms and conditions that are in accordance with certain ETSI policies. To the
6 extent that the allegations in paragraph 26 purport to describe or quote one or more ETSI
7 documents, Samsung avers that those documents are the best source of their full context and
8 content. Samsung denies the allegations of paragraph 26 to the extent they do not accurately
9 represent the documents. Samsung is without knowledge or information sufficient to form a belief
10 as to the truth of the remaining allegations of paragraph 26 and therefore denies them.

11 27. Samsung admits that ETSI's IPR Policy permits a member to make an undertaking
12 subject to the condition that those who seek licenses agree to reciprocate. Samsung is without
13 knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph
14 27 and therefore denies them.

15 28. Samsung admits that declarations made to ETSI pursuant to its IPR Policy are
16 governed, as least in part, by the laws of France. Samsung admits that, to the extent ETSI
17 members make binding contractual commitments to ETSI through declarations made to ETSI
18 pursuant to its IPR Policy, certain other members and/or implementers of the 3GPP standards may
19 be third-party beneficiaries. Except as expressly admitted, Samsung denies the remaining
20 allegations of paragraph 28.

21 29. Samsung admits that ETSI members who are subject to a commitment to offer
22 licenses on FRAND terms and conditions are obligated not to refuse to enter a license for
23 declared, essential patents that is fair, reasonable, and non-discriminatory. Samsung admits that
24 the FRAND requirement is intended to prevent SEP owners from extorting more favorable license
25 terms than what would have been obtained had their patents not been adopted into a standard.
26 Samsung is without knowledge or information sufficient to form a belief as to the truth of the
27 remaining allegations of paragraph 29 and therefore denies them.

28

1 30. Samsung objects to the allegations of this paragraph as calling for a legal
2 conclusion that requires no response.

3 31. Samsung admits that if an IPR owner refuses to provide the requested undertaking
4 that it is prepared to grant licenses on FRAND terms and conditions in accordance with the ETSI
5 IPR Policy, ETSI may, if appropriate, suspend work on relevant parts of the standard until the
6 matter has been resolved. Samsung is without knowledge or information sufficient to form a
7 belief as to the truth of the remaining allegations of paragraph 31 and therefore denies them.

8 32. Samsung is without knowledge or information sufficient to form a belief as to the
9 truth of the allegations of paragraph 32 and therefore denies them.

10 33. Samsung is without knowledge or information sufficient to form a belief as to the
11 truth of the allegations of paragraph 33 and therefore denies them.

12 34. Samsung admits that it has not entered into a formal license agreement with
13 Huawei for its SEP portfolio. Samsung admits that Huawei has not entered into a formal licensing
14 agreement with Samsung for its SEP portfolio. Except as expressly admitted, Samsung denies the
15 allegations of paragraph 34.

16 **C. Samsung's FRAND Commitment and SEP Portfolio**

17 35. Samsung admits that certain Samsung affiliates are members of ETSI. Samsung
18 admits that ETSI members are obligated to follow ETSI's IPR Policy. Except as expressly
19 admitted, Samsung denies the allegations of paragraph 35.

20 36. Samsung admits that SEC has submitted IPR Information Statement and Licensing
21 Declarations to ETSI. To the extent that the allegations in paragraph 36 purport to describe or
22 quote one or more ETSI documents, Samsung avers that those documents are the best source of
23 their full context and content. Samsung denies the allegations of paragraph 36 to the extent they
24 do not accurately represent the documents. Except as expressly admitted, Samsung denies the
25 remaining allegations of paragraph 36.

26 37. Samsung admits that SEC has submitted IPR Information Statement and Licensing
27 Declarations to ETSI that disclose patents that may be or may become essential to 3GPP
28 standards, including the LTE standard. Samsung admits that SEC has submitted IPR Information

1 Statement and Licensing Declarations to ETSI expressing its preparedness to grant licenses to
2 certain patents on FRAND terms and conditions as set forth in such documents and in accordance
3 with ETSI's IPR Policy. To the extent that the allegations in paragraph 37 purport to describe or
4 quote one or more ETSI documents, Samsung avers that those documents are the best source of
5 their full context and content. Samsung denies the allegations of paragraph 37 to the extent they
6 do not accurately represent the documents. Except as expressly admitted, Samsung denies the
7 remaining allegations of paragraph 37.

8 38. Samsung admits that SEC has submitted IPR Information Statement and Licensing
9 Declarations to ETSI disclosing patents and patent applications owned or co-owned by the
10 submitter, and that these patents include U.S. Patents and Applications for U.S. Patents. Except as
11 expressly admitted, Samsung denies the remaining allegations of paragraph 38.

12 39. Samsung admits that Exhibit 1 purports to be a copy of the ETSI IPR Policy
13 bearing the date "19 November 2014." To the extent that the allegations in paragraph 39 purport
14 to describe or quote one or more ETSI documents, Samsung avers that those documents are the
15 best source of their full context and content. Samsung denies the allegations of paragraph 39 to the
16 extent they do not accurately represent the documents. Except as expressly admitted, Samsung
17 denies the remaining allegations of paragraph 39.

18 40. Samsung admits that its FRAND declarations are binding contractual commitments
19 to ETSI for the benefit of ETSI, its members, and implementers of the relevant standards.
20 Samsung admits Huawei makes products that comply with 3GPP standards. Except as expressly
21 admitted, Samsung denies the remaining allegations of paragraph 40.

22 **D. License Negotiations Between Huawei and Samsung**

23 41. Samsung began negotiating a cross-license with Huawei no later than April 2011.
24 Except as expressly admitted, Samsung denies the remaining allegations of paragraph 41.

25 42. Samsung admits that it has proposed a cross-license to Huawei, including a
26 proposal made in 2015. Except as expressly admitted, Samsung denies the remaining allegations
27 of paragraph 42.

28 43. Samsung denies the allegations of paragraph 43.

1 44. Samsung denies the allegations of paragraph 44 .

2 45. Samsung denies the allegations of paragraph 45.

3 46. Samsung denies the allegations of paragraph 46.

4 47. Samsung denies the allegations of paragraph 47.

5 48. Samsung denies the allegations of paragraph 48.

6 **E. Defendants' Sales of 3GPP Standard-Compliant Products Without a License from**
7 **Huawei**

8 49. Samsung admits that certain Samsung entities sell products capable of accessing
9 UMTS and LTE networks. Samsung asserts that, to the extent that allegations in paragraph 49
10 purport to describe or quote one or more documents, those documents are the best source of their
11 full content and context. Samsung denies the allegations to the extent they do not accurately
12 represent the documents' full content and context. Except as expressly admitted, Samsung denies
13 the remaining allegations of paragraph 49.

14 50. Samsung admits that certain Samsung entities sell products capable of accessing
15 LTE networks. Samsung asserts that, to the extent that allegations in paragraph 50 purport to
16 describe or quote one or more documents, those documents are the best source of their full content
17 and context. Samsung denies the allegations to the extent they do not accurately represent the
18 documents' full content and context. Except as expressly admitted, Samsung denies the remaining
19 allegations of paragraph 50.

20 51. Samsung admits that certain of its products are capable of accessing LTE networks.
21 Except as expressly admitted, Samsung denies the remaining allegations of paragraph 51.

22 52. Samsung denies the allegations of paragraph 52.

23 **CLAIMS FOR RELIEF**

24 **FIRST CAUSE OF ACTION**

25 **(Breach of Contract)**

26 53. Samsung incorporates by reference its answers to paragraphs 1 through 52 above as
27 if fully set forth herein.

28

54. Samsung admits that SEC has submitted IPR licensing declaration forms to ETSI expressing SEC's preparedness to grant licenses on FRAND terms and conditions for certain patents as set forth in those declarations in accordance with the ETSI IPR Policy. Except as expressly admitted, Samsung is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations of paragraph 54 and therefore denies the same.

55. Samsung admits that SEC has disclosed to ETSI patents or applications for patents that may be or may become essential to 3GPP standards. Samsung admits it has represented to Huawei that it owns patents essential to 3GPP standards. Except as expressly admitted, Samsung denies the remaining allegations of paragraph 55.

56. Samsung admits Huawei is obligated under its declarations to ETSI to grant Samsung a license to Huawei's UMTS and LTE SEP portfolios on FRAND terms and conditions. Except as expressly admitted, Samsung denies the remaining allegations of paragraph 56.

57. Samsung denies the allegations of paragraph 57.

58. Samsung denies the allegations of paragraph 58.

59. Samsung denies the allegations of paragraph 59.

60. Samsung denies the allegations of paragraph 60.

SECOND CAUSE OF ACTION

(Declaratory Judgment of FRAND Terms and Conditions for a Cross-License)

61. Samsung incorporates by reference its answers to paragraphs 1 through 60 above as if fully set forth herein.

62. Samsung admits that Huawei has requested a license to Samsung's portfolio of patents essential to 3GPP standards. Except as expressly admitted, Samsung denies the remaining allegations of paragraph 62.

63. Samsung admits that it has requested a license to Huawei's portfolio of patents essential to 3GPP standards. Samsung admits that it is entitled to a license on FRAND terms and conditions for Huawei's portfolio of patents essential to 3GPP standards. Except as expressly admitted, Samsung denies the remaining allegations of paragraph 63.

1 64. Samsung admits that it has offered to grant Huawei a license on FRAND terms and
2 conditions to Samsung's portfolio of patents essential to UMTS and LTE standards. Samsung
3 admits that Huawei is obligated to grant Samsung a license on FRAND terms and conditions for
4 Huawei's portfolio of patents essential to UMTS and LTE standards. Except as expressly
5 admitted, Samsung denies the remaining allegations of paragraph 64.

6 65. Samsung and Huawei have not come to a formal agreement as to the terms and
7 conditions of a cross-license to the parties' respective portfolios of patents essential to UMTS and
8 LTE standards. Except as expressly admitted, Samsung denies the remaining allegations of
9 paragraph 65.

10 66. Samsung denies the allegations of paragraph 66.

11 67. Samsung denies the allegations of paragraph 67.

12 68. Samsung denies the allegations of paragraph 68.

13 **THIRD CAUSE OF ACTION**

14 **(Alleged Infringement of U.S. Patent No. 8,369,278)**

15 69. Samsung incorporates by reference its answers to paragraphs 1 through 68 above as
16 if fully set forth herein.

17 70. Samsung admits that Exhibit 4 purports to be a true and correct copy of United
18 States Patent No. 8,369,278 ("the '278 patent") entitled "Method and Apparatus for Sending
19 Control Signaling." Samsung admits that the copy of the '278 patent attached as Exhibit 4 states
20 on its face that it was issued by the USPTO on February 5, 2013. Samsung denies that any of the
21 asserted claims are valid and enforceable. Samsung is without knowledge or information
22 sufficient to form a belief as to the truth of the remaining allegations of paragraph 70, and
23 therefore denies the same.

24 71. Samsung is without knowledge or information sufficient to form a belief as to the
25 truth of the allegations of paragraph 71 and therefore denies the same.

26 72. Samsung asserts that, to the extent that the allegations in paragraph 72 purport to
27 describe or quote one or more documents, those documents are the best source of their full content
28 and context. Samsung denies the allegations to the extent they do not accurately represent the

1 documents' full content and context. Except as expressly admitted, Samsung denies the remaining
2 allegations of paragraph 72.

3 73. Samsung denies the allegations of paragraph 73.

4 74. Samsung denies the allegations of paragraph 74.

5 75. Samsung admits that on or around July 19, 2013, Huawei provided a list of patents
6 it claimed were essential to LTE standards. Except as expressly admitted, Samsung denies the
7 remaining allegations of paragraph 75.

8 76. Samsung asserts that, to the extent that the allegations in paragraph 76 purport to
9 describe or quote one or more documents, those documents are the best source of their full content
10 and context. Samsung denies the allegations to the extent they do not accurately represent the
11 documents' full content and context. Except as expressly admitted, Samsung denies the remaining
12 allegations of paragraph 76, including that Samsung has committed any acts of indirect/willful
13 infringement.

14 77. Samsung admits that it has conducted [REDACTED]
15 [REDACTED]. Except as expressly admitted, Samsung denies the remaining allegations
16 of paragraph 77.

17 78. Samsung denies the allegations of paragraph 78.

18 **FOURTH CAUSE OF ACTION**

19 **(Alleged Infringement of U.S. Patent No. 8,416,892)**

20 79. Samsung incorporates by reference its answers to paragraphs 1 through 78 above as
21 if fully set forth herein.

22 80. Samsung admits that Exhibit 4 purports to be a true and correct copy of United
23 States Patent No. 8,416,892 ("the '892 patent") entitled "Method and Apparatus for Sending
24 Control Signaling." Samsung admits that the copy of the '892 patent attached as Exhibit 7 states
25 on its face that it was issued by the USPTO on April 9, 2013. Samsung denies any of the asserted
26 claims are valid and enforceable. Samsung is without knowledge or information sufficient to form
27 a belief as to the truth of the remaining allegations of paragraph 80, and therefore denies the same.
28

1 81. Samsung is without knowledge or information sufficient to form a belief as to the
2 truth of the allegations of paragraph 81 and therefore denies the same.

3 82. Samsung asserts that, to the extent that the allegations in paragraph 82 purport to
4 describe or quote one or more documents, those documents are the best source of their full content
5 and context. Samsung denies the allegations to the extent they do not accurately represent the
6 documents' full content and context. Except as expressly admitted, Samsung denies the remaining
7 allegations of paragraph 82.

8 83. Samsung denies the allegations of paragraph 83.

9 84. Samsung denies the allegations of paragraph 84.

10 85. Samsung admits that on or around July 19, 2013, Huawei provided a list of patents
11 it claimed were essential to practicing the LTE standards. Except as expressly admitted, Samsung
12 denies the remaining allegations of paragraph 85.

13 86. Samsung asserts that, to the extent that the allegations in paragraph 86 purport to
14 describe or quote one or more documents, those documents are the best source of their full content
15 and context. Samsung denies the allegations to the extent they do not accurately represent the
16 documents' full content and context. Except as expressly admitted, Samsung denies the remaining
17 allegations of paragraph 86, including that Samsung has committed any acts of indirect/willful
18 infringement.

19 87. Samsung admits that it has conducted [REDACTED]
20 [REDACTED]. Except as expressly admitted, Samsung denies the remaining allegations
21 of paragraph 87.

22 88. Samsung denies the allegations of paragraph 88.

23 **FIFTH CAUSE OF ACTION**

24 **(Alleged Infringement of U.S. Patent No. 8,483,166)**

25 89. Samsung incorporates by reference its answers to paragraphs 1 through 88 above as
26 if fully set forth herein.

27 90. Samsung admits that Exhibit 9 purports to be a true and correct copy of United
28 States Patent No. 8,483,166 ("the '166 patent") entitled "Method and Apparatus for Accessing

1 Legacy Networks through Temporary ID of Evolved Network.” Samsung admits that the copy of
2 the ’166 patent attached as Exhibit 9 states on its face that it was issued by the USPTO on July 9,
3 2013. Samsung denies any of the asserted claims are valid and enforceable. Samsung is without
4 knowledge or information sufficient to form a belief as to the truth of the remaining allegations of
5 paragraph 90, and therefore denies the same.

6 91. Samsung is without knowledge or information sufficient to form a belief as to the
7 truth of the allegations of paragraph 91 and therefore denies the same.

8 92. Samsung asserts that, to the extent that the allegations in paragraph 92 purport to
9 describe or quote one or more documents, those documents are the best source of their full content
10 and context. Samsung denies the allegations to the extent they do not accurately represent the
11 documents’ full content and context. Except as expressly admitted, Samsung denies the remaining
12 allegations of paragraph 92.

13 93. Samsung denies the allegations of paragraph 93.

14 94. Samsung denies the allegations of paragraph 94.

15 95. Samsung admits that on or around December 31, 2015, Huawei provided a list of
16 patents it claimed were essential to standards. Except as expressly admitted, Samsung denies the
17 remaining allegations of paragraph 95.

18 96. Samsung asserts that, to the extent that the allegations in paragraph 96 purport to
19 describe or quote one or more documents, those documents are the best source of their full content
20 and context. Samsung denies the allegations to the extent they do not accurately represent the
21 documents’ full content and context. Except as expressly admitted, Samsung denies the remaining
22 allegations of paragraph 96, including that Samsung has committed any acts of indirect/willful
23 infringement.

24 97. Samsung admits that it has conducted [REDACTED]
25 [REDACTED]. Except as expressly admitted, Samsung denies the remaining allegations
26 of paragraph 97.

27 98. Samsung denies the allegations of paragraph 98.

28

SIXTH CAUSE OF ACTION

(Alleged Infringement of U.S. Patent No. 8,812,848)

99. Samsung incorporates by reference its answers to paragraphs 1 through 98 above as if fully set forth herein.

100. Samsung admits that Exhibit 11 purports to be a true and correct copy of United States Patent No. 8,812,848 (“the ’848 patent”) entitled “Method, System and Device for Negotiating Security Capability When Terminal Moves.” Samsung admits that the copy of the ’848 patent attached as Exhibit 11 states on its face that it was issued by the USPTO on August 19, 2014. Samsung denies any of the asserted claims are valid and enforceable. Samsung is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations of paragraph 100 of the Complaint, and therefore denies the same.

101. Samsung is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 101 of the Complaint and therefore denies the same.

102. Samsung asserts that, to the extent that the allegations in paragraph 102 purport to describe or quote one or more documents, those documents are the best source of their full content and context. Samsung denies the allegations to the extent they do not accurately represent the documents’ full content and context. Except as expressly admitted, Samsung denies the remaining allegations of paragraph 102 of the Complaint.

103. Samsung denies the allegations of paragraph 103 of the Complaint.

104. Samsung denies the allegations of paragraph 104 of the Complaint.

105. Samsung admits that on or around December 31, 2015, Huawei provided a list of patents it claimed were essential to standards. Except as expressly admitted, Samsung denies the remaining allegations of paragraph 105 of the Complaint.

106. Samsung asserts that, to the extent that the allegations in paragraph 106 purport to describe or quote one or more documents, those documents are the best source of their full content and context. Samsung denies the allegations to the extent they do not accurately represent the documents’ full content and context. Except as expressly admitted, Samsung denies the remaining

1 allegations of paragraph 106 of the Complaint, including that Samsung has committed any acts of
2 indirect/willful infringement.

3 107. Samsung admits that it has conducted [REDACTED]
4 [REDACTED]. Except as expressly admitted, Samsung denies the remaining allegations
5 of paragraph 107 of the Complaint.

6 108. Samsung denies the allegations of paragraph 108 of the Complaint.

7 **SEVENTH CAUSE OF ACTION**

8 **(Alleged Infringement of U.S. Patent No. 8,644,239)**

9 109. Samsung incorporates by reference its answers to paragraphs 1 through 108 above
10 as if fully set forth herein.

11 110. Samsung admits that Exhibit 13 purports to be a true and correct copy of United
12 States Patent No. 8,644,239 (“the ’239 patent”) entitled “Method and Apparatus for Allocating
13 and Processing Sequences in Communication System.” Samsung admits that the copy of the ’239
14 patent attached as Exhibit 13 states on its face that it was issued by the USPTO on February 4,
15 2014. Samsung denies any of the asserted claims are valid and enforceable. Samsung is without
16 knowledge or information sufficient to form a belief as to the truth of the remaining allegations of
17 paragraph 110 of the Complaint, and therefore denies the same.

18 111. Samsung is without knowledge or information sufficient to form a belief as to the
19 truth of the allegations of paragraph 111 of the Complaint and therefore denies the same.

20 112. Samsung asserts that, to the extent that the allegations in paragraph 112 purport to
21 describe or quote one or more documents, those documents are the best source of their full content
22 and context. Samsung denies the allegations to the extent they do not accurately represent the
23 documents’ full content and context. Except as expressly admitted, Samsung denies the remaining
24 allegations of paragraph 112 of the Complaint.

25 113. Samsung denies the allegations of paragraph 113 of the Complaint.

26 114. Samsung denies the allegations of paragraph 114 of the Complaint.

115. Samsung admits that on or around December 31, 2015, Huawei provided a list of patents it claimed were essential to standards. Except as expressly admitted, Samsung denies the remaining allegations of paragraph 115 of the Complaint.

116. Samsung asserts that, to the extent that the allegations in paragraph 116 purport to describe or quote one or more documents, those documents are the best source of their full content and context. Samsung denies the allegations to the extent they do not accurately represent the documents' full content and context. Except as expressly admitted, Samsung denies the remaining allegations of paragraph 116 of the Complaint, including that Samsung has committed any acts of indirect/willful infringement.

117. Samsung admits that it has conducted [REDACTED]. Except as expressly admitted, Samsung denies the remaining allegations of paragraph 117 of the Complaint.

118. Samsung denies the allegations of paragraph 118 of the Complaint.

EIGHTH CAUSE OF ACTION

(Alleged Infringement of U.S. Patent No. 8,885,587)

119. Samsung incorporates by reference its answers to paragraphs 1 through 118 above as if fully set forth herein.

120. Samsung admits that Exhibit 15 purports to be a true and correct copy of United States Patent No. 8,885,587 ("the '587 patent") entitled "Method, Base station, and User Equipment for Feeding Back ACK/NACK Information for Carrier Aggregation." Samsung admits that the copy of the '587 patent attached as Exhibit 15 states on its face that it was issued by the USPTO on November 11, 2014. Samsung denies any of the asserted claims are valid and enforceable. Samsung is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations of paragraph 120 of the Complaint, and therefore denies the same.

121. Samsung is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 121 of the Complaint and therefore denies the same.

1 122. Samsung asserts that, to the extent that the allegations in paragraph 122 purport to
2 describe or quote one or more documents, those documents are the best source of their full content
3 and context. Samsung denies the allegations to the extent they do not accurately represent the
4 documents' full content and context. Except as expressly admitted, Samsung denies the remaining
5 allegations of paragraph 122 of the Complaint.

6 123. Samsung denies the allegations of paragraph 123 of the Complaint.

7 124. Samsung denies the allegations of paragraph 124 of the Complaint.

8 125. Samsung admits that on or around December 31, 2015, Huawei provided a list of
9 patents it claimed were essential to LTE standards. Except as expressly admitted, Samsung denies
10 the remaining allegations of paragraph 125 of the Complaint.

11 126. Samsung asserts that, to the extent that the allegations in paragraph 126 purport to
12 describe or quote one or more documents, those documents are the best source of their full content
13 and context. Samsung denies the allegations to the extent they do not accurately represent the
14 documents' full content and context. Except as expressly admitted, Samsung denies the remaining
15 allegations of paragraph 126 of the Complaint, including that Samsung has committed any acts of
16 indirect/willful infringement.

17 127. Samsung admits that it has conducted [REDACTED]
18 [REDACTED]. Except as expressly admitted, Samsung denies the remaining allegations
19 of paragraph 127 of the Complaint.

20 128. Samsung denies the allegations of paragraph 128 of the Complaint.

21 **NINTH CAUSE OF ACTION**

22 **(Alleged Infringement of U.S. Patent No. 8,885,583)**

23 129. Samsung incorporates by reference its answers to paragraphs 1 through 128 above
24 as if fully set forth herein.

25 130. Samsung admits that Exhibit 17 purports to be a true and correct copy of United
26 States Patent No. 8,885,583 ("the '583 patent") entitled "Conditional Uplink Timing Alignment in
27 a Mobile Station Device of a Radio Communication System." Samsung admits that the copy of
28 the '583 patent attached as Exhibit 17 states on its face that it was issued by the USPTO on

1 November 11, 2014. Samsung denies any of the asserted claims are valid and enforceable.

2 Samsung is without knowledge or information sufficient to form a belief as to the truth of the
3 remaining allegations of paragraph 130 of the Complaint, and therefore denies the same.

4 131. Samsung is without knowledge or information sufficient to form a belief as to the
5 truth of the allegations of paragraph 131 of the Complaint and therefore denies the same.

6 132. Samsung asserts that, to the extent that the allegations in paragraph 132 purport to
7 describe or quote one or more documents, those documents are the best source of their full content
8 and context. Samsung denies the allegations to the extent they do not accurately represent the
9 documents' full content and context. Except as expressly admitted, Samsung denies the remaining
10 allegations of paragraph 132 of the Complaint.

11 133. Samsung denies the allegations of paragraph 133 of the Complaint.

12 134. Samsung denies the allegations of paragraph 134 of the Complaint.

13 135. Samsung admits that on or around December 31, 2015, Huawei provided a list of
14 patents it claimed were essential to standards, and that this list did not include the '583 patent.
15 Except as expressly admitted, Samsung denies the remaining allegations of paragraph 135 of the
16 Complaint.

17 136. Samsung asserts that, to the extent that the allegations in paragraph 136 purport to
18 describe or quote one or more documents, those documents are the best source of their full content
19 and context. Samsung denies the allegations to the extent they do not accurately represent the
20 documents' full content and context. Except as expressly admitted, Samsung denies the remaining
21 allegations of paragraph 136 of the Complaint, including that Samsung has committed any acts of
22 indirect/willful infringement.

23 137. Samsung admits that it has conducted [REDACTED]
24 [REDACTED]. Except as expressly admitted, Samsung denies the remaining allegations
25 of paragraph 137 of the Complaint.

26 138. Samsung denies the allegations of paragraph 138 of the Complaint.

27
28

TENTH CAUSE OF ACTION

(Alleged Infringement of U.S. Patent No. 8,639,246)

139. Samsung incorporates by reference its answers to paragraphs 1 through 138 above as if fully set forth herein.

140. Samsung admits that Exhibit 19 purports to be a true and correct copy of United States Patent No. 8,639,246 (“the ’246 patent”) entitled “Conditional Uplink Timing Alignment in a Mobile Station Device of a Radio Communication System.” Samsung admits that the copy of the ’246 patent attached as Exhibit 19 states on its face that it was issued by the USPTO on January 28, 2014. Samsung denies any of the asserted claims are valid and enforceable. Samsung is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations of paragraph 140 of the Complaint, and therefore denies the same.

141. Samsung is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 141 of the Complaint and therefore denies the same.

142. Samsung asserts that, to the extent that the allegations in paragraph 142 purport to describe or quote one or more documents, those documents are the best source of their full content and context. Samsung denies the allegations to the extent they do not accurately represent the documents’ full content and context. Except as expressly admitted, Samsung denies the remaining allegations of paragraph 142 of the Complaint.

143. Samsung denies the allegations of paragraph 143 of the Complaint.

144. Samsung denies the allegations of paragraph 144 of the Complaint.

145. Samsung admits that on or around December 31, 2015, Huawei provided a list of patents it claimed were essential to LTE standards. Except as expressly admitted, Samsung denies the remaining allegations of paragraph 145 of the Complaint.

146. Samsung asserts that, to the extent that the allegations in paragraph 146 purport to describe or quote one or more documents, those documents are the best source of their full content and context. Samsung denies the allegations to the extent they do not accurately represent the documents’ full content and context. Except as expressly admitted, Samsung denies the remaining

1 allegations of paragraph 146 of the Complaint, including that Samsung has committed any acts of
2 indirect/willful infringement.

3 147. Samsung admits that it has conducted [REDACTED]
4 [REDACTED]. Except as expressly admitted, Samsung denies the remaining allegations
5 of paragraph 147 of the Complaint.

6 148. Samsung denies the allegations of paragraph 148 of the Complaint.

7 **ELEVENTH CAUSE OF ACTION**

8 **(Alleged Infringement of U.S. Patent No. 8,412,197)**

9 149. Samsung incorporates by reference its answers to paragraphs 1 through 148 above
10 as if fully set forth herein.

11 150. Samsung admits that Exhibit 21 purports to be a true and correct copy of United
12 States Patent No. 8,412,197 (“the ’197 patent”) entitled “Method, Terminal, and System for Cell
13 Reselection.” Samsung admits that the copy of the ’197 patent attached as Exhibit 21 states on its
14 face that it was issued by the USPTO on April 2, 2013. Samsung denies any of the asserted claims
15 are valid and enforceable. Samsung is without knowledge or information sufficient to form a
16 belief as to the truth of the remaining allegations of paragraph 150 of the Complaint, and therefore
17 denies the same.

18 151. Samsung is without knowledge or information sufficient to form a belief as to the
19 truth of the allegations of paragraph 151 of the Complaint and therefore denies the same.

20 152. Samsung asserts that, to the extent that the allegations in paragraph 152 purport to
21 describe or quote one or more documents, those documents are the best source of their full content
22 and context. Samsung denies the allegations to the extent they do not accurately represent the
23 documents’ full content and context. Except as expressly admitted, Samsung denies the remaining
24 allegations of paragraph 152 of the Complaint.

25 153. Samsung denies the allegations of paragraph 153 of the Complaint.

26 154. Samsung denies the allegations of paragraph 154 of the Complaint.

1 155. Samsung admits that on or around December 31, 2015, Huawei provided a list of
2 patents it claimed were essential to standards. Except as expressly admitted, Samsung denies the
3 remaining allegations of paragraph 155 of the Complaint.

4 156. Samsung asserts that, to the extent that the allegations in paragraph 156 purport to
5 describe or quote one or more documents, those documents are the best source of their full content
6 and context. Samsung denies the allegations to the extent they do not accurately represent the
7 documents' full content and context. Except as expressly admitted, Samsung denies the remaining
8 allegations of paragraph 156 of the Complaint, including that Samsung has committed any acts of
9 indirect/willful infringement.

10 157. Samsung admits that it has conducted [REDACTED]
11 [REDACTED]. Except as expressly admitted, Samsung denies the remaining allegations
12 of paragraph 157 of the Complaint.

13 158. Samsung denies the allegations of paragraph 158 of the Complaint.

14 **TWELFTH CAUSE OF ACTION**

15 **(Alleged Infringement of U.S. Patent No. 8,996,003)**

16 159. Samsung incorporates by reference its answers to paragraphs 1 through 158 above
17 as if fully set forth herein.

18 160. Samsung admits that Exhibit 23 purports to be a true and correct copy of United
19 States Patent No. 8,996,003 ("the '003 patent") entitled "Method, Terminal, and System for Cell
20 Reselection." Samsung admits that the copy of the '003 patent attached as Exhibit 23 states on its
21 face that it was issued by the USPTO on March 31, 2015. Samsung denies any of the asserted
22 claims are valid and enforceable. Samsung is without knowledge or information sufficient to form
23 a belief as to the truth of the remaining allegations of paragraph 160 of the Complaint, and
24 therefore denies the same.

25 161. Samsung is without knowledge or information sufficient to form a belief as to the
26 truth of the allegations of paragraph 161 of the Complaint and therefore denies the same.

27 162. Samsung asserts that, to the extent that the allegations in paragraph 162 purport to
28 describe or quote one or more documents, those documents are the best source of their full content

1 and context. Samsung denies the allegations to the extent they do not accurately represent the
2 documents' full content and context. Except as expressly admitted, Samsung denies the remaining
3 allegations of paragraph 162 of the Complaint.

4 163. Samsung denies the allegations of paragraph 163 of the Complaint.

5 164. Samsung denies the allegations of paragraph 164 of the Complaint.

6 165. Samsung admits that on or around December 31, 2015, Huawei provided a list of
7 patents it claimed were essential to standards. Except as expressly admitted, Samsung denies the
8 remaining allegations of paragraph 165 of the Complaint.

9 166. Samsung asserts that, to the extent that the allegations in paragraph 166 purport to
10 describe or quote one or more documents, those documents are the best source of their full content
11 and context. Samsung denies the allegations to the extent they do not accurately represent the
12 documents' full content and context. Except as expressly admitted, Samsung denies the remaining
13 allegations of paragraph 166 of the Complaint, including that Samsung has committed any acts of
14 indirect/willful infringement.

15 167. Samsung admits that that it has conducted [REDACTED]
16 [REDACTED]. Except as expressly admitted, Samsung denies the remaining allegations
17 of paragraph 167 of the Complaint.

18 168. Samsung denies the allegations of paragraph 168 of the Complaint.

19 **THIRTEENTH CAUSE OF ACTION**

20 **(Alleged Infringement of U.S. Patent No. 8,724,613)**

21 169. Samsung incorporates by reference its answers to paragraphs 1 through 168 above
22 as if fully set forth herein.

23 170. Samsung admits that Exhibit 25 purports to be a true and correct copy of United
24 States Patent No. 8,724,613 ("the '613 patent") entitled "Method and Device for Service Time
25 Division Multiplexing." Samsung admits that the copy of the '613 patent attached as Exhibit 25
26 states on its face that it was issued by the USPTO on May 13, 2014. Samsung denies any of the
27 asserted claims are valid and enforceable. Samsung is without knowledge or information
28

1 sufficient to form a belief as to the truth of the remaining allegations of paragraph 170 of the
2 Complaint, and therefore denies the same.

3 171. Samsung is without knowledge or information sufficient to form a belief as to the
4 truth of the allegations of paragraph 171 of the Complaint and therefore denies the same.

5 172. Samsung asserts that, to the extent that the allegations in paragraph 172 purport to
6 describe or quote one or more documents, those documents are the best source of their full content
7 and context. Samsung denies the allegations to the extent they do not accurately represent the
8 documents' full content and context. Except as expressly admitted, Samsung denies the remaining
9 allegations of paragraph 162 of the Complaint.

10 173. Samsung denies the allegations of paragraph 173 of the Complaint.

11 174. Samsung denies the allegations of paragraph 174 of the Complaint.

12 175. Samsung admits that on or around December 31, 2015, Huawei provided a list of
13 patents it claimed were essential to standards. Except as expressly admitted, Samsung denies the
14 remaining allegations of paragraph 175 of the Complaint.

15 176. Samsung asserts that, to the extent that the allegations in paragraph 176 purport to
16 describe or quote one or more documents, those documents are the best source of their full content
17 and context. Samsung denies the allegations to the extent they do not accurately represent the
18 documents' full content and context. Except as expressly admitted, Samsung denies the remaining
19 allegations of paragraph 176 of the Complaint, including that Samsung has committed any acts of
20 indirect/willful infringement.

21 177. Samsung admits that it has conducted [REDACTED]
22 [REDACTED]. Except as expressly admitted, Samsung denies the remaining allegations
23 of paragraph 177 of the Complaint.

24 178. Samsung denies the allegations of paragraph 178 of the Complaint.

25 **PRAYER FOR RELIEF**

26 Samsung denies that Huawei is entitled to any relief, and specifically denies all of the
27 allegations and prayers for relief requested in paragraphs A-M of its prayer for relief in the
28 Complaint.

1 **SAMSUNG’S DEFENSES**

2 179. Pursuant to Federal Rule of Civil Procedure 8(c), Samsung alleges and asserts the
3 following defenses in response to the allegations of the Complaint, undertaking the burden of
4 proof only as to those defenses required by law, regardless of how such defenses are denominated
5 herein. Samsung reserves the right to assert any other defenses that discovery may reveal.

6 **FIRST DEFENSE**

7 **(Failure to State a Claim)**

8 180. Huawei’s Complaint fails to state a claim upon which relief can be granted.

9 **SECOND DEFENSE**

10 **(Invalidity)**

11 181. The asserted claims of the ’278 patent, the ’892 patent, the ’166 patent, the ’848
12 patent, the ’239 patent, the ’587 patent, the ’583 patent, the ’246 patent, the ’197 patent, the ’003
13 patent, and the ’613 patent (collectively, “Huawei’s Patents-in-Suit”) in the Complaint, as properly
14 construed, are invalid, void, and/or unenforceable for failure to comply with one or more of the
15 conditions for patentability set forth in Title 35 of the United States Code, including without
16 limitation, for example, Sections 101, 102, 103, 112, and/or 132.

17 **THIRD DEFENSE**

18 **(Non-Infringement)**

19 182. Samsung does not infringe and has not infringed, induced infringement of, or
20 contributed to infringement of, any valid and enforceable claim of Huawei’s Patents-in-Suit
21 literally or under the doctrine of equivalents, willfully or otherwise.

22 **FOURTH DEFENSE**

23 **(Limitation of Damages or Costs)**

24 183. Huawei’s claims for relief are barred in whole or in part, including without
25 limitation, by 35 U.S.C. §§ 286, 287, and/or 288. By failing to satisfy the requirements of 35
26 U.S.C. § 287, Huawei is not entitled to damages arising before the filing of this action. Any claim
27 for damages is otherwise limited by 35 U.S.C. § 286 and by any applicable commitment to license
28

1 the Patents-in-Suit on FRAND terms and conditions. Huawei is barred under 35 U.S.C. § 288
2 from receiving any costs associated with this suit.

3 **FIFTH DEFENSE**
4 **(Inequitable Conduct)**

5 184. The '197, '246, and '003 patents are unenforceable due to inequitable conduct
6 because, upon information and belief, at least two of the named inventors of these patents withheld
7 prior art that they knew to be material to the patentability, with the specific intent to deceive the
8 United States Patent & Trademark Office ("USPTO").

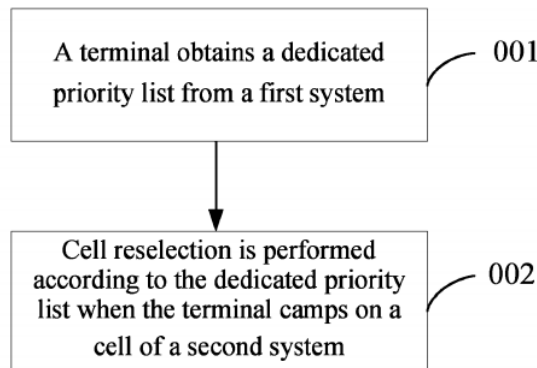
9 185. The '197, '246, and '003 patents are part of the same family. The '197 patent was
10 filed in the United States on October 12, 2010. The '246 patent was filed in the United States as a
11 continuation of the application underlying the '197 patent on November 8, 2012. The '003 patent
12 was filed in the United States as a continuation of the application underlying the '246 patent on
13 December 19, 2013. The '197, '246, and '003 patents have the same title, same named inventors,
14 and share the same specification.

15 186. The '197, '246, and '003 patents are directed to a process called "cell reselection."
16 By way of background, a mobile network is geographically organized into areas called "cells."
17 Each cell includes a base station that communicates with mobile terminals (*e.g.*, mobile phones)
18 within the cell, allowing them to transmit and receive data over the network. When a mobile
19 terminal leaves a particular cell, it may "reselect" a new cell in order to maintain the ability to
20 send and receive data.

21 187. The background section of the '197, '246, and '003 patent specification explains
22 that "when a terminal performs cell reselection during movement, there may be several
23 frequencies available for selection in the system, and there may be many cells of several systems
24 available for selection." '197 patent at 1:35-39. The background section then explains that
25 solutions existing at the time of the invention used a "dedicated priority list" to determine which
26 cell to reselect. *Id.* at 1:57-59. Using the dedicated priority list, "the terminal will first measure a
27 frequency or system having a higher priority," and "[i]f a cell of the frequency or system having a
28 higher priority meets the cell reselection criterion, the cell will be reselected." *Id.* at 1:46-49. The

1 criteria may include “load balance,” which measures the cell’s capacity to service additional
 2 terminals. *Id.* at 1:54-55.

3 188. The ’197, ’246, and ’003 patents purport to describe cell reselection in the scenario
 4 where a mobile terminal moves from an LTE system to a non-LTE system. *Id.* at Abstract.
 5 According to the patent specification, the existing technical solutions required the mobile terminal
 6 to obtain “a dedicated priority list established by the non-LTE mobile communication system”
 7 when it moved into that system. *Id.* at 1:56-58. The specification states that this technique
 8 “causes too much increased signaling and too high costs for network upgrade.” *Id.* at 1:65-2:2.
 9 The specification proposes an alleged improvement where the mobile terminal receives a
 10 dedicated priority list from the LTE system, and then uses the list to perform cell reselection after
 11 it moves to a non-LTE system. *Id.* at Abstract. Figure 1 of the patents illustrates this concept:



18 FIG.1

19
 20 ’197 patent, Fig. 1.

21 189. The specification also describes a time interval during which the priority list
 22 remains valid. *Id.* at 4:63-5:23. “The invalidation of the dedicated priority list may be
 23 implemented by setting a timer. In other words, a valid time of the dedicated priority list is set by
 24 a timer and the timer starts when the terminal obtains the dedicated priority list.” *Id.* at 5:1-4.
 25 “[W]hen the dedicated priority list is invalid, the terminal stops using the dedicated priority list
 26 and deletes the dedicated priority list.” *Id.* at 5:21-23.

190. The asserted claims of the '197, '246, and '003 patents reflect these concepts. Asserted claim 1 of the '197 patent, asserted claim 11 of '246 patent, and asserted claim 1 of the '003 patent are representative, and each claims is reproduced below with emphasis:

1. A method for cell reselection, comprising:

obtaining, by a terminal, a dedicated priority list and a valid time of the dedicated priority list from a Long Term Evolution (LTE) system; and

performing, by the terminal, cell reselection according to the dedicated priority list and the valid time of the dedicated priority list, when the terminal camps on a cell of a non-LTE system;

wherein, when the terminal camps on a cell of the non-LTE system, the performing cell reselection according to the dedicated priority list and the valid time comprises:

performing, by the terminal camping on the cell of the non-LTE system, cell reselection according to the dedicated priority list before the valid time expires, wherein when the terminal camps on the cell of the non-LTE system, the dedicated priority list is invalid after the valid time expires.

'197 patent, claim 1 (emphasis added).

1. A method for inter-system cell reselection, comprising:

when a terminal is in a cell of a Long Term Evolution (LTE) system, *receiving, by the terminal, a message including a dedicated priority list from the LTE system; and*

when the terminal camps on a cell of a non-LTE system, performing, by the terminal, the inter-system cell reselection in accordance with the dedicated priority list before a valid time of the dedicated priority list expires.

'246 patent, claim 1 (emphasis added).

1. A non-transitory computer readable medium, comprising:

a computer program code including executable instructions, which, when executed by a terminal device, cause the terminal device to perform a method for cell reselection as follows:

receiving, when in a cell of a Long Term Evolution (LTE) system, a message including a dedicated priority list from the LTE system; and

performing, when camping on a cell of a non-LTE system, the cell reselection in accordance with the received dedicated priority list before a valid time of the dedicated priority list expires.

'003 patent, claim 1 (emphasis added).

1 191. During prosecution of the application underlying the '197 patent, the Patent
 2 Examiner rejected the pending claims as obvious based on U.S. Patent Publication No.
 3 2008/0268843 ("Ore") in combination with U.S. Patent Publication No. 2007/0191006
 4 ("Carpenter"). In responding to the rejection, Huawei represented to the USPTO that the key
 5 features distinguishing the pending claims from Ore and Carpenter were (1) the requirement of
 6 obtaining a priority list from an LTE network and using the list for reselection in a non-LTE
 7 network, and (2) the use of a time interval during which the priority list remains valid:

8 However, in claim 1, the dedicated priority list obtained from the LTE system is
 9 used by the terminal when the terminal camps on a cell of the non-LTE system.
 10 Therefore, Ore does not teach that the UE can *obtain a dedicated priority list from*
 11 *an LTE system and use the dedicated priority list to perform reselection when the*
 12 *UE camps on a cell of a non-LTE system*, as disclosed in claim 1.

11 ...

12 Furthermore, as acknowledged in the Office action ... Ore does not disclose
 13 *receiving a valid time of the dedicated priority list from a system.*

14 ...

15 Carpenter fails to cure the deficiencies of Ore because Carpenter fails to disclose
 16 those features recited in independent claim 1 and similarly recited in independent
 17 claim 9, which are not recited by Ore.

18 Exhibit 1 ('197 Prosecution History, Feb. 14, 2012 Remarks) at 7-8 (emphasis in original).²

19 192. Following Huawei's arguments, the Patent Examiner submitted proposed claim
 20 amendments to clarify these requirements. *See* Exhibit 2 ('197 Prosecution History, Aug. 10,
 21 2012 Notice of Allowance) at 7-8. The Patent Examiner then allowed the claims as amended. *Id.*
 22 In his Notice of Allowance, the Patent Examiner noted that the prior art failed to disclose the two
 23 limitations Huawei had relied on to distinguish its pending claims:

24 However [the] cited references, alone or in any combination, neither discloses nor
 25 fairly suggests [the] combination of features, specifically, obtaining, by a terminal,
 26 a dedicated priority list and a valid time of the dedicated priority list from an LTE
 27 system; and performing, by the terminal, cell reselection according to the dedicated
 28 priority list and the valid time of the dedicated priority list, when the terminal
 camps on a cell of a non-LTE system.

27 ² The term "UE," or "user equipment," is generally used interchangeably with the terms
 28 "mobile station" and "mobile terminal."

1 *Id.* at 9.

2 193. The '197, '246, and '003 patents allegedly claim priority to Chinese Patent
 3 Application 2008/10091957, filed April 9, 2008. Prior to April 9, 2008, at least two of the named
 4 inventors of the '197, '246, and '003 patents—Johan Johansson and Michael Roberts—
 5 participated on behalf of Huawei in the Third Generation Partnership Project (“3GPP”) to develop
 6 Long-Term Evolution (“LTE”) cellular standards. In this capacity, Messrs. Johansson and Roberts
 7 attended meetings where 3GPP participants discussed specific aspects of the LTE standards and
 8 presented papers with proposed contributions to the standards. One such meeting—referred to as
 9 “R2-60”—was held in Jeju, Korea on November 7-9, 2007. Another such meeting—referred to as
 10 “R2-60b”—was held in Seville, Spain on January 14-18, 2008. Attendee lists for the R2-60 and
 11 R2-60b meetings identify both Messrs. Johansson and Roberts as attending participants. *See*
 12 Exhibits 3 and 4.

13 194. During the R2-60b meeting, participants from Nokia Corporation and Nokia
 14 Siemens Networks presented a paper titled, “Reselection Scenarios for Multi-RAT Terminals in
 15 Rel-8,” numbered R2-080338. *See* Exhibit 5. The R2-080338 paper describes techniques for cell
 16 reselection when a mobile terminal travels between LTE and non-LTE networks. *Id.* at 1. The
 17 paper addresses nine different reselection scenarios. *Id.* at 2. Scenarios 7 and 8 describe
 18 reselection from a UTRAN or GERAN (*i.e.*, non-LTE) network. *Id.* at 3. The paper proposes
 19 three options for Scenarios 7 and 8. *Id.* In Option 3, the mobile terminal first camps on a cell
 20 within an EUTRAN (*i.e.*, LTE) network. *Id.* The LTE network provides the mobile terminal with
 21 reselection priorities. *Id.* The mobile terminal then moves to a non-LTE network and performs
 22 reselection based on the priorities provided by the LTE network. *Id.* The R2-080338 paper
 23 describes Option 3 as follows:

24 Option 3 would allow some predictability in UE behaviour, once the UE has
 25 camped in E-UTRAN. ***In this case, the UE would remember the thresholds and***
 26 ***priorities received whilst in E-UTRAN.*** ... Example: UE camps in E-UTRA
 macro-cell, reselects to neighbouring UTRA macro-cell, and then reselects to
 UTRA indoor micro-cell.

27 *Id.* (emphasis added).

1 195. During the R2-60 meeting, participants from NTT DoCoMo, Inc. presented a paper
2 titled, “Inter-frequency / RAT Idle Mode Mobility Control,” numbered R2-075161. *See* Exhibit 6.
3 The R2-075161 paper describes techniques for cell reselection, including a scenario where a
4 mobile terminal receives “control information” that includes a priority list and a timer. *Id.* at 2.
5 The paper explains that upon expiration of the timer, the mobile terminal discards the priority list:

6 An expiry timer can be signaled optionally as part of the UE specific control
7 information. Upon expiry of the timer, the UE shall discard the UE specific control
8 information and continue with the normal cell reselection procedure.

8 *Id.*

9 196. As shown above and in the claim chart of Exhibit 7, the R2-080338 and R2-075161
10 papers disclose the key limitations from the asserted claims of the ’197, ’246, and ’003 patents
11 that Huawei relied on to distinguish the claims from the prior art during prosecution: (1) the
12 requirement of obtaining a priority list from an LTE network and using the list for reselection in a
13 non-LTE network, and (2) the use of a time interval during which the priority list remains valid.
14 The R2-080338 and R2-075161 papers are material to the patentability of the ’197, ’246, and ’003
15 patents at least because the combination of these two references renders obvious the asserted
16 claims of the patent as shown in the claim chart in Exhibit 7. Had the patent examiner known of
17 the R2-080338 and R2-075161 papers, he would have found these claims obvious and not allowed
18 them to issue. The R2-080338 and R2-075161 papers are not cumulative of information before
19 the USPTO because they disclose the key claim requirements that Huawei represented were
20 missing from the prior art cited by the Patent Examiner, and Huawei did not represent that any
21 other prior art cited during prosecution disclosed these requirements.

22 197. Upon information and belief, Messrs. Johansson and Roberts received and knew of
23 the R2-080338 paper because they were attending participants at the R2-60 and R2-60b meetings.
24 *See* Exhibits 3 and 4. Messrs. Johansson and Roberts did not disclose the R2-080338 and R2-
25 075161 papers to the USPTO during prosecution of the applications underlying the ’197, ’246,
26 and ’003 patents, as shown in Information Disclosure Statements (“IDSs”) submitted by Huawei
27 during prosecution. *See* Exhibits 8, 9, and 10.

1 198. As named inventors of the '197, '246, and '003 patents, Messrs. Johansson and
2 Roberts had a duty of candor and good faith in dealing with the USPTO during the prosecution of
3 the applications underlying these patents. The duty of candor and good faith included a duty to
4 disclose to the USPTO all information known to Messrs. Johansson and Roberts to be material to
5 the patentability of the pending claims as defined in 37 C.F.R. § 1.56.

6 199. Upon information and belief, Messrs. Johansson and Roberts breached their duty of
7 candor and good faith. Upon information and belief, Messrs. Johansson and Roberts withheld the
8 R2-080338 and R2-075161 papers with the specific intent to deceive the USPTO during
9 prosecution of each of the applications underlying each of the '197, '246, and '003 patents.
10 Evidence of specific intent to deceive includes the fact that Messrs. Johansson and Roberts
11 submitted other papers that were presented at other 3GPP meetings during prosecution of the
12 applications underlying the '197, '246 patent, and '003 patents. For example, an IDS submitted
13 during prosecution of the application underlying the parent '197 patent identifies two papers,
14 referred to as R2-073622 and R2-074001. *See* Exhibit 8. These papers describe cell reselection
15 techniques, and were presented during meetings R2-59 and R2-59b of the 3GPP. *Id.* Messrs.
16 Johansson and Roberts attended these meetings on behalf of Huawei in the same capacity that they
17 attended the R2-60 and R2-60b meeting. *See* Exhibits 11 and 12. The fact that Messrs. Johansson
18 and Roberts provided the USPTO with the R2-073622 and R2-074001 papers, but not the R2-
19 080338 and R2-075161 papers, is at least circumstantial evidence that they withheld the R2-
20 080338 and R2-075161 papers with the specific intent to deceive the USPTO into believing that
21 the prior art did not disclose the key limitations Huawei relied on to secure allowance of the
22 claims of the '197, '246, and '003 patents. These actions amount to inequitable conduct and
23 render the '197, '246, and '003 patents unenforceable.

24 200. The claims of the '246 and '003 patents are rendered unenforceable for the
25 additional and independent reason that the applications underlying these patents are continuations
26 of the application underlying the '197 patent. The inequitable conduct committed during
27 prosecution of the application underlying the '197 patent relates, both immediately and
28 necessarily, to the claims of the '246 and '003 patents.

1 otherwise negotiate a FRAND license in good faith before filing its Complaint for patent
2 infringement and to date it has not done so.

3 206. [REDACTED]

4 [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 207. At all times during negotiations between Huawei and Samsung, Samsung was
13 willing to license Huawei's Patents-in-Suit on FRAND terms and conditions.

14 208. Samsung always negotiated in good faith. [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 [REDACTED]

18 [REDACTED]

19 209. Huawei further acted contrary to the obligations expressed in its representations
20 above when it unilaterally filed actions in China seeking injunctions against all of Samsung's
21 Chinese manufacturing and sales activities, in an improper effort to force Samsung to accept
22 Huawei's unfair and unreasonable licensing demands.

23 210. By refusing to provide Samsung with FRAND license terms and conditions, and
24 instead seeking injunctions against Samsung's Chinese manufacturing and sales activities and
25 demanding an excessive and unjustified monetary windfall that is wholly unconnected to technical
26 and economic reality, Huawei has breached what—according to Huawei's own contentions—are
27 its FRAND commitments regarding Huawei's Patents-in-Suit.

28

SEVENTH DEFENSE

(Unenforceability)

211. One or more of Huawei's Patents-in-Suit are unenforceable against Samsung under the equitable doctrines of estoppel, waiver, implied waiver, unclean hands, or other equitable doctrines.

212. Upon information and belief, Huawei's actions, including but not limited to those set forth above regarding Huawei's breach of what—according to Huawei's own contentions—are its FRAND commitments, equitably estop Huawei from asserting, and/or constitute waiver or implied waiver of, any rights to enforce any allegedly standard-essential patents against any entity allegedly practicing the standard, including Samsung.

213. Huawei's actions, including but not limited to those set forth above regarding Huawei's breach of what—according to Huawei's own contentions—are its FRAND commitments, render Huawei's allegedly standard-essential patents unenforceable on grounds of unclean hands (or other equitable doctrines) against any entity allegedly practicing the standard, including Samsung.

214. Additionally, Huawei's contentions regarding Huawei's Patents-in-Suit, if true, would show that Huawei has engaged in a repeated pattern of standard-setting misconduct, rendering the patents unenforceable.

215. Huawei alleges that it owns or is the assignee of the '278, '166, '587, '246, '197, '003, and '613 patents.

216. Huawei contends that "Huawei and its affiliates have been active participating members of ETSI since 1999." Complaint ¶ 32.

217. Huawei contends that "ETSI's IPR Policy requires members to disclose patents they believe are or may become 'essential' to complying with a standard and declare whether they are prepared to grant irrevocable licenses on FRAND terms and conditions." Complaint ¶ 24.

218. Huawei contends that "Huawei, on its behalf and on behalf of its affiliates, has disclosed to ETSI over 1,200 patent families that are or may become essential to practicing one or more 3GPP standards." Complaint ¶ 33.

1 219. Huawei alleges that “use of mandatory portions of the LTE standard infringes the
2 ’278 patent” and identifies, *inter alia*, specifically “the 3GPP TS 36.212 standard.” Complaint ¶
3 72.

4 220. Huawei, however, fails to contend that it ever disclosed the ’278 patent as essential
5 to the 3GPP TS 36.212 standard. *See* Complaint ¶ 33 (attaching “Huawei’s declarations to ETSI”
6 but omitting this contention).

7 221. On information and belief, as of August 22, 2016, Huawei has not submitted an
8 IPR Licensing Declaration Form to ETSI that discloses the ’278 patent as potentially essential to
9 the 3GPP TS 36.212 standard.

10 222. On information and belief, as of August 22, 2016, Huawei has not submitted an
11 IPR Licensing Declaration Form to ETSI that provides an irrevocable undertaking that Huawei is
12 prepared to grant irrevocable licenses under the ’278 patent on FRAND terms and conditions in
13 accordance with Clause 6.1 of the ETSI IPR Policy with respect to 3GPP TS 36.212.

14 223. Huawei alleges that “use of mandatory portions of the LTE standard infringes the
15 ’166 patent” and identifies specifically the 3GPP TS 23.401, 3GPP TS 23.003, and 3GPP TS
16 25.331 standards. Complaint ¶ 92.

17 224. Huawei, however, fails to contend that it ever disclosed the ’166 patent as essential
18 to the 3GPP TS 23.401, 3GPP TS 23.003, and 3GPP TS 25.331 standards. *See* Complaint ¶ 33
19 (attaching “Huawei’s declarations to ETSI” but omitting these contentions).

20 225. On information and belief, as of August 22, 2016, Huawei has not submitted an
21 IPR Licensing Declaration Form to ETSI that discloses the ’166 patent as potentially essential to
22 the 3GPP TS 23.401, 3GPP TS 23.003, and 3GPP TS 25.331 standards.

23 226. On information and belief, as of August 22, 2016, Huawei has not submitted an
24 IPR Licensing Declaration Form to ETSI that provides an irrevocable undertaking that Huawei is
25 prepared to grant irrevocable licenses under the ’166 patent on FRAND terms and conditions in
26 accordance with Clause 6.1 of the ETSI IPR Policy with respect to the 3GPP TS 23.401, 3GPP TS
27 23.003, and 3GPP TS 25.331 standards.

28

1 227. In fact, on information and belief, as of August 22, 2016, when Huawei accused
2 Samsung of infringement of the '166 patent for its alleged use of mandatory portions of the LTE
3 standard, Huawei has failed to disclose the '166 patent to ETSI as potentially essential to *any*
4 ETSI or 3GPP standards.

5 228. Huawei alleges that “use of mandatory portions of the LTE standard infringes the
6 '587 patent” and identifies specifically the 3GPP TS 36.213 and 3GPP TS 36.300 standards.
7 Complaint ¶ 122.

8 229. Huawei, however, fails to contend that it ever disclosed the '587 patent as essential
9 to the 3GPP TS 36.213 and 3GPP TS 36.300 standards. *See* Complaint ¶ 33 (attaching “Huawei’s
10 declarations to ETSI” but omitting these contentions).

11 230. On information and belief, as of August 22, 2016, Huawei has not submitted an
12 IPR Licensing Declaration Form to ETSI that discloses the '587 patent as potentially essential to
13 the 3GPP TS 36.213 and 3GPP TS 36.300 standards.

14 231. On information and belief, as of August 22, 2016, Huawei has not submitted an
15 IPR Licensing Declaration Form to ETSI that provides an irrevocable undertaking that Huawei is
16 prepared to grant irrevocable licenses under the '587 patent on FRAND terms and conditions in
17 accordance with Clause 6.1 of the ETSI IPR Policy with respect to the 3GPP TS 36.213 and 3GPP
18 TS 36.300 standards.

19 232. In fact, on information and belief, as of August 22, 2016, when Huawei accused
20 Samsung of infringement of the '587 patent for its alleged use of mandatory portions of the LTE
21 standard, Huawei has failed to disclose the '587 patent to ETSI as potentially essential to *any*
22 ETSI or 3GPP standards.

23 233. Huawei alleges that “use of mandatory portions of the LTE standard infringes the
24 '246 patent” and identifies specifically the 3GPP TS 36.304 and 3GPP TS 36.331 standards.
25 Complaint ¶ 142.

26 234. Huawei, however, fails to contend that it ever disclosed the '246 patent as essential
27 to the 3GPP TS 36.304 and 3GPP TS 36.331 standards. *See* Complaint ¶ 33 (attaching “Huawei’s
28 declarations to ETSI” but omitting these contentions).

1 235. Huawei alleges that “use of mandatory portions of the LTE standard infringes the
2 ‘197 patent” and identifies specifically the 3GPP TS 36.304 and 3GPP TS 36.331 standards.
3 Complaint ¶ 152.

4 236. Huawei, however, fails to contend that it ever disclosed the ‘197 patent as essential
5 to the 3GPP TS 36.304 and 3GPP TS 36.331 standards. *See* Complaint ¶ 33 (attaching “Huawei’s
6 declarations to ETSI” but omitting these contentions).

7 237. Huawei alleges that “use of mandatory portions of the LTE standard infringes the
8 ‘003 patent” and identifies specifically the 3GPP TS 36.304 and 3GPP TS 36.331 standards.
9 Complaint ¶ 162.

10 238. Huawei, however, fails to contend that it ever disclosed the ‘003 patent as essential
11 to the 3GPP TS 36.304 and 3GPP TS 36.331 standards. *See* Complaint ¶ 33 (attaching “Huawei’s
12 declarations to ETSI” but omitting these contentions).

13 239. Huawei alleges that “use of mandatory portions of the LTE standard infringes the
14 ‘613 patent” and, *inter alia*, identifies specifically the 3GPP TS 36.212 and 3GPP TS 36.321
15 standards. Complaint ¶ 172.

16 240. Huawei, however, fails to contend that it ever disclosed the ‘613 patent as essential
17 to the 3GPP TS 36.212 and 3GPP TS 36.321 standards. *See* Complaint ¶ 33 (attaching “Huawei’s
18 declarations to ETSI” but omitting these contentions).

19 241. On information and belief, as of August 22, 2016, Huawei has not submitted an
20 IPR Licensing Declaration Form to ETSI that discloses the ‘613 patent as potentially essential to
21 the 3GPP TS 36.212 and 3GPP TS 36.321 standards.

22 242. On information and belief, as of August 22, 2016, Huawei has not submitted an
23 IPR Licensing Declaration Form to ETSI that provides an irrevocable undertaking that Huawei is
24 prepared to grant irrevocable licenses under the ‘613 patent on FRAND terms and conditions in
25 accordance with Clause 6.1 of the ETSI IPR Policy with respect to the 3GPP TS 36.212 and 3GPP
26 TS 36.321 standards.

27 243. Based on Huawei’s representations above, Huawei’s omission of any contentions
28 that it satisfied its disclosure obligations for the ‘278, ‘166, ‘587, ‘246, ‘197, ‘003, and ‘613

1 patents is compelling evidence that Huawei has engaged in a long-standing practice of
2 intentionally and knowingly making material omissions in connection with 3GPP standards-
3 setting, that its failure to disclose these patents was made in bad faith with the intent to deceive
4 and induce reliance, and that as a consequence of this failure to disclose, ETSI members, their
5 successors, and customers throughout the supply chain, including Samsung and relevant third
6 parties, thereafter designed, manufactured, and/or marketed products meant to comply with ETSI
7 standards, thereby reasonably and justifiably relying on Huawei's misleading and false
8 representations that it would abide by ETSI IPR Policies, to their detriment.

9 244. In addition, to the extent Huawei contends that it is not obligated to license one or
10 more of its patents on fair, reasonable, and non-discriminatory terms and conditions as a result of
11 its failure to submit an IPR disclosure form to ETSI for that patent, Huawei should not be
12 permitted to do so given the allegation its Complaint that Huawei "on its behalf and on behalf of
13 its affiliates, has committed to license, and has licensed to multiple companies, its standard-
14 essential patents and those of its affiliates ('Huawei's SEP portfolio') on FRAND terms and
15 conditions according to ETSI's IPR Policy." (Complaint ¶ 33)

16 245. The foregoing actions and conduct by Huawei constitute standard-setting
17 misconduct, threatening continued harm to Samsung and relevant third-parties, rendering the
18 patents unenforceable.

19 **EIGHTH DEFENSE**

20 **(License and/or Patent Exhaustion)**

21 246. On information and belief, one or more of the manufacturers or suppliers of any
22 component or sub-system allegedly embodying the claimed inventions of Huawei's Patents-in-
23 Suit are licensed or otherwise authorized to practice the claimed inventions, and therefore
24 Samsung is licensed. Alternatively, Huawei's claims are barred under the doctrine of patent
25 exhaustion.

NINTH DEFENSE**(Prosecution History Estoppel and Disclaimer)**

247. Huawei's claims are barred in whole or in part by the doctrines of prosecution history estoppel and/or prosecution disclaimer. Samsung has not infringed and is not infringing the claims of Huawei's Patents-in-Suit at least due to statements, representations, admissions, elections, positions, concessions and filings made to the USPTO during the prosecution of the applications that matured into Huawei's Patents-in-Suit and/or related patents that, in part or collectively, constitute prosecution history estoppel and/or prosecution disclaimer barring Huawei from asserting that the claims of the patents encompass or are infringed by any product or activity of Samsung.

TENTH DEFENSE**(Acts of Others)**

248. Huawei's claims are barred in whole or in part because Samsung is not liable for acts of others over whom it exercises no direction or control.

ELEVENTH DEFENSE**(No Injunctive Relief)**

249. Huawei's remedies at law are adequate, and its alleged injury is not immediate or irreparable, such that equitable relief would be inappropriate for any determined infringement of Huawei's Patents-in-Suit. Further, according to Huawei's contentions, it has made binding commitments to license Huawei's Patents-in-Suit on FRAND terms and conditions to ETSI's members and relevant third-parties, thereby knowingly surrendering its right to injunctive or other exclusionary relief. By virtue of not having offered Samsung, a willing licensee, a license on FRAND terms and condition, Huawei has no legal right to injunctive relief.

SAMSUNG’S COUNTERCLAIMS

Counterclaimants Samsung Electronics Co., Ltd. (“SEC”), and Samsung Electronics America, Inc. (“SEA”) (collectively, “Samsung”) assert the following allegations and counterclaims against Huawei Technologies, Co., Ltd, Huawei Device USA, Inc., Huawei Technologies USA, Inc., and HiSilicon Technologies Co., Ltd. (collectively “Huawei”). Samsung reserves the right to assert additional counterclaims, as warranted by facts revealed through investigation and discovery.

NATURE OF ACTION

1. In these Counterclaims, Samsung seeks (a) judgment that Plaintiffs Huawei Technologies Co., Ltd., Huawei Device USA, Inc., Huawei Technologies USA, Inc., and HiSilicon Technologies Co., Ltd. (“HiSilicon”) (collectively, “Counterclaim-Defendants” or “Huawei”) infringe United States Patent Nos. 8,228,827 (“the ’827 patent”), 8,315,195 (“the ’195 patent”), RE44,105 (“the RE’105 patent”), 8,457,588 (“the ’588 patent”), 8,509,350 (“the ’350 patent”), 9,113,419 (“the ’419 patent”), 8,619,726 (“the ’726 patent”), 8,761,130 (“the ’130 patent”), 9,288,825 (“the ’825 patent”), 7,706,348 (“the ’348 patent”), and 8,995,924 (“the ’924 patent”) (collectively, “Samsung’s Patents-in-Suit”); (b) judgment that Counterclaim-Defendants have monopolized the Relevant Technology Markets in violation of Section 2 of the Sherman Act, 15 U.S.C. § 2; (c) judgment that United States Patent Nos. 8,369,278 (“the ’278 patent”), 8,416,892 (“the ’892 patent”), 8,483,166 (“the ’166 patent”), 8,812,848 (“the ’848 patent”), 8,644,239 (“the ’239 patent”), 8,885,587 (“the ’587 patent”), 8,885,583 (“the ’583 patent”), 8,639,246 (“the ’246 patent”), 8,412,197 (“the ’197 patent”), 8,996,003 (“the ’003 patent”), and 8,724,613 (“the ’613 patent”) (collectively, “Huawei’s Patents-in-Suit”) are unenforceable due to, *inter alia*, Huawei’s breach of its FRAND obligations; (d) declaratory judgments that Huawei’s Patents-in-Suit are not infringed by Samsung; and (e) judgment that Huawei’s Patents-in-Suit are invalid.

THE COUNTERCLAIM PARTIES

2. Counterclaim-plaintiff Samsung Electronics Co., Ltd. (“SEC”) is a corporation organized and existing under the laws of the country of Korea having its corporate headquarters at 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 443-742, Republic of Korea.

3. Counterclaim-plaintiff Samsung Electronics America, Inc. (“SEA”) is a corporation organized and existing under the law of the state of New York having its corporate headquarters at 85 Challenger Road, Ridgefield Park, New Jersey, 07660.

4. According to its Complaint, counterclaim-defendant Huawei Technologies, Co., Ltd. is a Chinese company with its principal place of business in Bantian, Longgang District, Shenzhen, People’s Republic of China.

5. According to its Complaint, counterclaim-defendant Huawei Device USA, Inc. is a Texas corporation with its principal place of business in Plano, Texas.

6. According to its Complaint, counterclaim-defendant Huawei Technologies USA, Inc. is a Texas corporation with its principal place of business in Plano, Texas.

7. Counterclaim-defendant HiSilicon Technologies Co., Ltd. (“HiSilicon”) is a Chinese company with its principal place of business in Bantian, Longgang District, Shenzhen, People’s Republic of China. On information and belief, HiSilicon is a wholly owned subsidiary of Huawei Investment & Holding Co., Ltd.

8. According to HiSilicon’s website, “Hisilicon has set up design divisions in Beijing, Shanghai, *Silicon Valley (USA)* and Sweden.” See “About HiSilicon,” <http://www.hisilicon.com/about/about.html> (last visited Aug. 20, 2016) (emphasis added).

9. Huawei alleges that it is the owner of all rights, title, and interest in Huawei’s Patents-in-Suit.

JURISDICTION AND VENUE

10. This Court has subject matter jurisdiction over the Counterclaims under 28 U.S.C. §§ 2201 and 2202 as a declaratory judgment action; and, as averred in the Complaint, under 28 U.S.C. §§ 1331 and 1338 as an action arising under the Patent Laws, Title 35 of the United States Code.

1 11. This Court has personal jurisdiction over Huawei because Huawei has commenced
2 the underlying patent infringement action in this Court.

3 12. Venue lies in this Court under 28 U.S.C. §§1391 and 1400(b). This Court has
4 supplemental jurisdiction over the Counterclaims pursuant to 28 U.S.C. § 1367.

5 **FACTUAL BACKGROUND**

6 **A. Samsung's Innovation and Patented Technology**

7 13. Established as a small business in Taegu, South Korea, in 1969, Samsung
8 Electronics Co., Ltd., along with its subsidiaries, Samsung Electronics America, Inc., and
9 Samsung Research America, Inc., has grown to become a global leader in various technology
10 areas, widely ranging from computers, wireless, and mobile handsets, to semiconductor, home
11 appliances and digital imaging. Samsung is one of the most successful manufacturers of wireless
12 communication devices in the world and has long focused on the United States as a critical market
13 for its products.

14 14. As a result of consistent investment in design, research, development, testing,
15 customer service, packaging, distribution, sales and marketing of its mobile telephones, Samsung
16 is the number one provider by volume of mobile devices in the United States.

17 15. Samsung has a long history of groundbreaking innovation across a wide range of
18 technologies. Samsung's commitment to innovation is demonstrated in part by the billions of
19 dollars in research and development expenditures incurred over the years. From 2010 through
20 2015 alone, Samsung invested more than \$65 billion in research and development. More than a
21 quarter of all Samsung employees—over 50,000 engineers overall, including about 8,700 in
22 telecommunications—daily engage in cutting-edge research and development projects.

23 16. Samsung has been a pioneer in the wireless telecommunications industry since the
24 industry's inception. Samsung has dedicated time and resources to developing wireless
25 communication technology that has increased the efficiency, reliability and functionality of
26 standards-based networks and that has made a plethora of new features available to the owners and
27 users of those networks.

28

1 17. Samsung's commitment to innovation and investment in research and development
2 is also reflected in the extensive patent coverage that Samsung has obtained for its inventions.
3 This portfolio, which according to USPTO statistics includes more than 56,000 issued U.S. patent,
4 including more than 10,000 patents in the telecommunications field, is a direct result of
5 Samsung's substantial and ongoing investment in research and development. For the tenth year in
6 a row in 2015, Samsung was second—only behind IBM—as a recipient of the most U.S. Patents.

7 18. Samsung's patents, including Samsung's Patents-in-Suit, relate to fundamental
8 innovations that increase mobile device reliability, efficiency, and quality of mobile handsets and
9 other products. These innovations are critical to the user's ability to communicate with family,
10 friends, and business associates reliably and effectively. Each of Samsung's Patents-in-Suit are
11 also essential to either the Universal Mobile Telecommunications System ("UMTS") or the Long
12 Term Evolution ("LTE") standards.

13 19. The rapid pace of technological innovation in the telecommunications industry
14 requires companies to invest substantial sums of money in research and development on a
15 continuous basis in order to remain competitive. As discussed above, Samsung has invested and
16 continues to invest tremendous amounts of money in research and development costs, including in
17 standards such as UMTS and LTE, and continues to invest tremendous amounts of money in
18 research and development costs in order to maintain its position at the forefront of technological
19 innovation. particularly in the telecommunications sector.

20 20. Various wireless devices rely on technologies developed and incorporated in
21 industry standards. Those devices connect to a variety of wireless networks, including the
22 networks of wireless carriers to provide telecommunications services. Carriers operate wireless
23 systems that enable users to place and receive telephone calls, send and receive e-mails, and
24 connect to the Internet through wireless devices. The devices and networks communicate using
25 radio signals that carry encoded information through the air and which are relayed via fixed
26 wireless communication base stations. Both Huawei and Samsung sell wireless devices that
27 connect to networks, such as UMTS and LTE. Samsung developed its first mobile phone in 1988.
28 Huawei released its first mobile phone in 2004.

1 21. Companies around the world manufacture wireless devices. These manufacturers,
2 at least in the United States typically sell their phones to the mobile wireless carriers, which in
3 turn, sell the phones to users. The wireless devices must be compatible with network equipment
4 for each of them to work properly within a network. Because interoperability is crucial for
5 telecommunications, the industry uses common mobile wireless technology and participates in the
6 crucial process of standards development, ensuring an efficient and functional system.

7 22. In order to harmonize the efforts of these companies, regional standard setting
8 organizations (“SSOs”) were developed to create technical specifications that companies could
9 follow to ensure their products would be compatible with other companies’ products and systems.

10 23. ETSI is an independent, non-profit SSO that produces globally-accepted standards
11 for the telecommunications industry. ETSI has more than 700 members from more than 60
12 countries across five continents. In addition to its own activities, ETSI is also one of six SSOs that
13 are organizational partners of the 3rd Generation Partnership Project (“3GPP”), which exists to
14 unite the SSOs in the development of worldwide standards for the telecommunications industry.
15 Together, ETSI and its members have developed common technical standards that often become
16 mandatory as, in some cases, national or international regulatory bodies require adherence to
17 particular ETSI standards. UMTS and LTE are two ETSI standards.

18 24. The importance of Samsung’s technical innovations to the development and
19 implementation of these standards is reflected by the number of patents that Samsung has been
20 awarded that are essential to the practice of these standards . For example, for the past two years,
21 Taiwan’s Intellectual Property Office has issued a report on Telecom Technology Patent Trends,
22 where it tabulates, by company, the number of patents essential to LTE standards. In each of those
23 years, Samsung has ranked number one, with more LTE standard essential patents that are in fact
24 essential to these standards than any other company in the world.

25 **B. Accused Huawei Products**

26 25. Upon information and belief, Huawei uses, sells, offers to sell, and/or imports
27 mobile devices compatible with the LTE and UMTS standards, including smartphones, tablets,
28 and related devices, in and to the Northern District of California and throughout the United States

1 31. Samsung has owned the '827 patent since it was issued. A true and correct copy of
2 the '827 patent is attached hereto as Exhibit 13.

3 32. The inventions set forth in the '827 patent relate to a random access procedure in a
4 mobile communication system, where user equipment may be attempting to access the mobile
5 communication system at the same time. The user equipment use a timer and user-equipment
6 specific control information to efficiently determine whether they were successful in accessing the
7 system. This approach not only streamlines the access process in the user equipment, but it also
8 reduces traffic and signaling overhead in the mobile communication system.

9 33. The use of mandatory portions of the LTE standard infringes the '827 patent.

10 34. For example, the LTE standard 3GPP TS 36.321 (including v8.8.0, and all
11 subsequent releases and versions) requires that terminals that perform the contention resolution
12 claimed by the '827 patent, as specified in the 3GPP TS 36.321 standard at section 5.1.

13 35. The '827 patent claims priority under 35 U.S.C. §119(a) to a Korean Patent
14 Application filed in the Korean Intellectual Property Office on Feb. 9, 2007 and assigned Serial
15 No. 2007-14024.

16 36. On December 30, 2008, Samsung declared to ETSI that U.S. Application No.
17 12/028,508, which issued as the '827 patent, may be or may become essential to the LTE standard
18 3GPP TS 36.321, as shown in Exhibit 14 attached hereto.

19 37. On information and belief, Huawei's Accused 4G Products use the mandatory
20 portions of the LTE standard.

21 38. Based on the use of the mandatory portions of the LTE standard, Huawei's
22 Accused 4G products infringe the '827 patent. For example, the claims of the '827 patent,
23 including but not limited to claims 9 and 12, read on the LTE standard as shown on Exhibit 15
24 attached hereto.

25 39. On information and belief, Huawei has directly infringed and continues to directly
26 infringe at least claims 9 and 12 of the '827 patent pursuant to 35 U.S.C. § 271(a), literally or
27 under the doctrine of equivalents, by using, selling, offering to sell, and importing into the United
28 States the Accused 4G Products, on or after the issuance date of the patent.

1 40. Additionally, Huawei has been, and currently is, indirectly infringing at least
2 claims 9 and 12 of the '827 patent by inducing infringement under 35 U.S.C. § 271(b) and as a
3 contributory infringer under 35 U.S.C. § 271(c).

4 41. Huawei knew of the '827 patent, or should have known of the '827 patent but was
5 willfully blind to its existence.

6 42. Huawei has had actual knowledge of the '827 patent since at least as early as the
7 filing of these Counterclaims.

8 43. Additionally, on or before September 7, 2013, Samsung notified Huawei of its
9 infringement by providing Huawei with a list of Samsung patents essential to practicing the LTE
10 standard, including the '827 patent, as well as an infringement claim chart for the '827 patent.

11 44. Huawei has provided the Accused 4G Products to its customers and instructions to
12 use the Accused 4G Products in an infringing manner while being on notice of or willfully blind to
13 the '827 patent and its infringement thereof. Therefore, Huawei knew or should have known of
14 the '827 patent and of its own infringing acts, or deliberately took steps to avoid learning of those
15 facts.

16 45. Huawei knowingly and intentionally encourages and aids at least its end-user
17 customers to directly infringe the '827 patent.

18 46. On information and belief, Huawei provides the Accused 4G Products, which are
19 sold and specifically configured to infringe the '827 patent as described above, to end-user
20 customers so that such customers will use the Accused 4G Products in an infringing manner.

21 47. Huawei actively instructs its customers on how to use the Accused 4G Products,
22 including through product manuals and advertising.

23 48. For example, an end user of the Accused 4G Products practices the '827 patent
24 whenever using said product in an ordinary manner, such as to browse the web, utilize
25 applications that receive data over a 4G LTE network, or to receive 4G LTE downlink data (e.g.,
26 movies, pictures, etc.).

27 49. The Huawei user manual for the P8 lite, for instance, instructs users that they may
28 turn on mobile data to access and browse the internet, send and receive email, synchronize a

1 calendar, download songs and applications, receive weather updates, send and receive messages,
2 and otherwise engage in activities that require transmission and receipt of data over the network.
3 *See, e.g.*, Exhibit 16.

4 50. When used as instructed, Huawei's customers use these products to practice the
5 methods and use the apparatus of the '827 patent and directly infringe at least claims 9 and 12 of
6 the '827 patent. Huawei induces such infringement by providing the Accused 4G Products and
7 instructions to enable and facilitate infringement, knowing of, or being willfully blind to the
8 existence of the '827 patent. On information and belief, Huawei specifically intends that its
9 actions will result in infringement of at least claims 9 and 12 of the '827 patent, or subjectively
10 believes that its actions will result in infringement of the '827 patent but took deliberate actions to
11 avoid learning of those facts, as set forth above.

12 51. Huawei contributorily infringes at least claims 9 and 12 of the '827 patent by
13 providing the Accused 4G Products and/or software or hardware components thereof, that embody
14 a material part of the claimed inventions of the '827 patent, that are known by Huawei to be
15 specially made or adapted for use in an infringing manner, and are not staple articles with
16 substantial non-infringing uses. The Accused 4G Products are specially designed to infringe at
17 least claims 9 and 12 of the '827 patent, and their accused components have no substantial non-
18 infringing uses.

19 52. Huawei's infringement of the '827 patent has been and continues to be willful, and
20 Huawei's conduct renders this case exceptional under 35 U.S.C. § 285. As set forth herein,
21 Samsung has attempted to negotiate in good faith an appropriate cross-license between the
22 companies' respective standards-related patent portfolios.

23 53. As part of these efforts, Samsung provided Huawei with a list of exemplary
24 Samsung LTE and UMTS SEPs, including the '827 patent, on or about August 9, 2013.

25 54. Huawei therefore had knowledge of the '827 patent at least as early as August 9,
26 2013 and no later than the filing of these Counterclaims.

27 55. Samsung also provided Huawei with an infringement claim chart for the '827
28 patent on or about September 7, 2013.

1 64. For example, the LTE standard 3GPP TS 36.211 (including v8.7.0, and all
2 subsequent releases and versions) requires that terminals receive from base stations information
3 associated with OFDM symbols carrying control channels, as specified in the 3GPP TS 36.211
4 v8.7.0 standard at section 6.7. Furthermore, the LTE standard 3GPP TS 36.213 (including v8.7.0,
5 and all subsequent releases and versions) requires determining a set of control channel candidates
6 based on an identifier of the terminal, as specified in the 3GPP TS 36.213 v8.7.0 standard at
7 section 9.1.1.

8 65. The '195 patent is continuation of U.S. Application Ser. No. 12/112,376, which
9 issued as U.S. Pat. No. 8,189,502 and was filed in the U.S. Patent and Trademark Office on
10 Apr. 30, 2008, and claims priority under 35 U.S.C. §119(a) to Korean Patent Application Serial
11 Nos. 2007-42817 and 2007-79269, which were filed in the Korean Intellectual Property Office on
12 May 2, 2007 and on Aug. 7, 2007, respectively.

13 66. On December 30, 2008, Samsung declared to ETSI that the application to which
14 the '195 is a continuation of and claims priority to may be or may become essential to the LTE
15 standard 3GPP TS 36.213, section 9.1.1 as shown in Exhibit 14 attached hereto. On December 18,
16 2015, Samsung declared to ETSI that U.S. Application Ser. No. 14/570,437, which is a
17 continuation of U.S. Application Ser. No. 13/681,018, which was filed in the U.S. Patent and
18 Trademark Office on Nov. 19, 2012, which is a continuation of U.S. Application Ser. No.
19 13/481,044, which was filed in the U.S. Patent and Trademark Office on May 25, 2012, and issued
20 as the '195 patent, may be or may become essential to the LTE standard 3GPP TS 36.213 as
21 shown in Exhibit 18 attached hereto.

22 67. On information and belief, Huawei's Accused 4G Products use the mandatory
23 portions of the LTE standard covered by the '195 patent, and, therefore, infringe the '195 patent.
24 For example, the claims of the '195 patent, including but not limited to claims 9 and 25, read on
25 the LTE standard as shown on Exhibit 19 attached hereto.

26 68. On information and belief, Huawei has directly infringed and continue to directly
27 infringe at least claims 9 and 25 of the '195 patent pursuant to 35 U.S.C. § 271(a), literally or
28

1 under the doctrine of equivalents, by using, selling, offering to sell, and importing in(to) the
2 United States the Accused 4G Products, on or after the issuance date of the patent.

3 69. Additionally, Huawei has been, and currently is, indirectly infringing at least
4 claims 9 and 25 of the '195 patent by inducing infringement under 35 U.S.C. § 271(b) and as a
5 contributory infringer under 35 U.S.C. § 271(c).

6 70. Huawei knew of the '195 patent, or should have known of the '195 patent but was
7 willfully blind to its existence.

8 71. Huawei has had actual knowledge of the '195 patent since at least as early as the
9 filing of these Counterclaims. Additionally, on or before September 7, 2013, Samsung notified
10 Huawei of its infringement by providing Huawei with a list of Samsung patents essential to
11 practicing the LTE standard, including the '195 patent, as well as an infringement claim chart for
12 the '195 patent.

13 72. Huawei has provided the Accused 4G Products to its customers and instructions to
14 use the Accused 4G Products in an infringing manner while being on notice of or willfully blind to
15 the '195 patent and its infringement thereof. Therefore, Huawei knew or should have known of
16 the '195 patent and of its own infringing acts, or deliberately took steps to avoid learning of those
17 facts.

18 73. Huawei knowingly and intentionally encourages and aids at least its end-user
19 customers to directly infringe the '195 patent.

20 74. On information and belief, Huawei provides the Accused 4G Products, which are
21 sold and specifically configured to infringe the '195 patent as described above, to end-user
22 customers so that such customers will use the Accused 4G Products in an infringing manner.
23 Huawei actively instructs its customers on how to use the Accused 4G Products, including through
24 product manuals and advertising. For example, an end user of the Accused 4G Products practices
25 the '195 patent whenever using said product in an ordinary manner, such as to browse the web,
26 utilize applications that receive data over a 4G LTE network, or to receive 4G LTE downlink data
27 (e.g., movies, pictures, etc.). The Huawei user manual for the P8 lite, for instance, instructs users
28 that they may turn on mobile data to access and browse the internet, send and receive email,

1 synchronize a calendar, download songs and applications, receive weather updates, send and
2 receive messages, and otherwise engage in activities that require transmission and receipt of data
3 over the network. *See, e.g.*, Exhibit 16.

4 75. When used as instructed, Huawei's customers use these products to practice the
5 methods and use the apparatus of the '195 patent and directly infringe at least claims 9 and 25 of
6 the '195 patent. Huawei induces such infringement by providing the Accused 4G Products and
7 instructions to enable and facilitate infringement, knowing of, or being willfully blind to the
8 existence of the '195 patent. On information and belief, Huawei specifically intends that its
9 actions will result in infringement of at least claims 9 and 25 of the '195 patent, or subjectively
10 believes that its actions will result in infringement of the '195 patent but took deliberate actions to
11 avoid learning of those facts, as set forth above.

12 76. Huawei contributorily infringes at least claims 9 and 25 of the '195 patent by
13 providing the Accused 4G Products and/or software or hardware components thereof, that embody
14 a material part of the claimed inventions of the '195 patent, that are known by Huawei to be
15 specially made or adapted for use in an infringing manner, and are not staple articles with
16 substantial non-infringing uses. The Accused 4G Products are specially designed to infringe at
17 least claims 9 and 25 of the '195 patent, and their accused components have no substantial non-
18 infringing uses.

19 77. Huawei's infringement of the '195 patent has been and continues to be willful, and
20 Huawei's conduct renders this case exceptional under 35 U.S.C. § 285. As set forth herein,
21 Samsung has attempted to negotiate in good faith an appropriate cross-license between the
22 companies' respective standards-related patent portfolios.

23 78. As part of these efforts, Samsung provided Huawei with a list of exemplary
24 Samsung LTE and UMTS SEPs, including the '195 patent, on or about August 9, 2013.

25 79. Huawei therefore had knowledge of the '195 patent at least as early as August 9,
26 2013 and no later than the filing of these Counterclaims.

27 80. Samsung also provided Huawei with an infringement claim chart for the '195
28 patent on or about September 7, 2013.

1 88. The use of mandatory portions of the LTE standard infringes the RE'105 patent.

2 89. For example, the LTE standard 3GPP TS 36.211 (including v8.7.0, and all
3 subsequent releases and versions) requires that physical uplink shared channel (PUSCH) data be
4 Fourier transform pre-coded through a transform precoder and mapped to a corresponding set of
5 subcarriers through a resource element mapper, while physical uplink control channel (PUCCH)
6 data is not precoded, as detailed in the 3GPP TS 36.211 v8.7.0 standard at sections 5.3 and 5.4.

7 90. The RE'105 patent is a reissue of U.S. Patent Application Ser. No. 11/374,928 filed
8 March 14, 2006 now U.S. Pat. No. 7,787,546, and further claims priority to U.S. Provisional
9 Patent Application 60/668,797 filed April 6, 2005.

10 91. On December 30, 2008, Samsung declared to ETSI that U.S. Application Ser. No.
11 11/374,928 may be or may become essential to the LTE standard 3GPP TS 36.211 as shown in
12 Exhibit 14 attached hereto.

13 92. On information and belief, Huawei's Accused 4G Products use the mandatory
14 portions of the LTE standard.

15 93. Based on the use of the mandatory portions of the LTE standard, Huawei's
16 Accused 4G products infringe the RE'105 patent. For example, the claims of the RE'105 patent,
17 including but not limited to claims 28 and 38, read on the LTE standard as shown on Exhibit 21
18 attached hereto.

19 94. On information and belief, Huawei has directly infringed and continue to directly
20 infringe at least claims 28 and 38 of the RE'105 patent pursuant to 35 U.S.C. § 271(a), literally or
21 under the doctrine of equivalents, by using, selling, offering to sell, and importing into the United
22 States the Accused 4G Products, on or after the issuance date of the patent.

23 95. Additionally, Huawei has been, and currently is, indirectly infringing at least
24 claims 28 and 38 of the RE'105 patent by inducing infringement under 35 U.S.C. § 271(b) and as
25 a contributory infringer under 35 U.S.C. § 271(c).

26 96. Huawei knew of the RE'105 patent, or should have known of the RE'105 patent
27 but was willfully blind to its existence.

28

1 97. Huawei has had actual knowledge of the RE'105 patent since at least as early as the
2 filing of these Counterclaims.

3 98. Additionally, on or before September 7, 2013, Samsung notified Huawei of its
4 infringement by providing Huawei with a list of Samsung patents essential to practicing the LTE
5 standard, including the RE'105 patent, as well as an infringement claim chart for the RE'105
6 patent.

7 99. Huawei has provided the Accused 4G Products to its customers and instructions to
8 use the Accused 4G Products in an infringing manner while being on notice of or willfully blind to
9 the RE'105 patent and its infringement thereof. Therefore, Huawei knew or should have known of
10 the RE'105 patent and of its own infringing acts, or deliberately took steps to avoid learning of
11 those facts.

12 100. Huawei knowingly and intentionally encourages and aids at least its end-user
13 customers to directly infringe the RE'105 patent.

14 101. On information and belief, Huawei provides the Accused 4G Products, which are
15 sold and specifically configured to infringe the RE'105 patent as described above, to end-user
16 customers so that such customers will use the Accused 4G Products in an infringing manner.

17 102. Huawei actively instructs its customers on how to use the Accused 4G Products,
18 including through product manuals and advertising.

19 103. For example, an end user of the Accused 4G Products practices the RE'105 patent
20 whenever using said product in an ordinary manner, such as to browse the web, utilize
21 applications that receive data over a 4G LTE network, or to receive 4G LTE downlink data (e.g.,
22 movies, pictures, etc.).

23 104. The Huawei user manual for the P8 lite, for instance, instructs users that they may
24 turn on mobile data to access and browse the internet, send and receive email, synchronize a
25 calendar, download songs and applications, receive weather updates, send and receive messages,
26 and otherwise engage in activities that require transmission and receipt of data over the network.
27 *See, e.g.,* Exhibit 14.

28

1 105. When used as instructed, Huawei's customers use these products to practice the
2 methods and use the apparatus of the RE'105 patent and directly infringe at least claims 28 and 38
3 of the RE'105 patent. Huawei induces such infringement by providing the Accused 4G Products
4 and instructions to enable and facilitate infringement, knowing of, or being willfully blind to the
5 existence of the RE'105 patent. On information and belief, Huawei specifically intends that its
6 actions will result in infringement of at least claims 28 and 38 of the RE'105 patent, or
7 subjectively believes that its actions will result in infringement of the RE'105 patent but took
8 deliberate actions to avoid learning of those facts, as set forth above.

9 106. Huawei contributorily infringes at least claims 28 and 38 of the RE'105 patent by
10 providing the Accused 4G Products and/or software or hardware components thereof, that embody
11 a material part of the claimed inventions of the RE'105 patent, that are known by Huawei to be
12 specially made or adapted for use in an infringing manner, and are not staple articles with
13 substantial non-infringing uses. The Accused 4G Products are specially designed to infringe at
14 least claims 28 and 38 of the RE'105 patent, and their accused components have no substantial
15 non-infringing uses.

16 107. Huawei's infringement of the RE'105 patent has been and continues to be willful,
17 and Huawei's conduct renders this case exceptional under 35 U.S.C. § 285. As set forth herein,
18 Samsung has attempted to negotiate in good faith an appropriate cross-license between the
19 companies' respective standards-related patent portfolios.

20 108. As part of these efforts, Samsung provided Huawei with a list of exemplary
21 Samsung LTE and UMTS SEPs, including the RE'105 patent, on or about August 9, 2013.

22 109. Huawei therefore had knowledge of the RE'105 patent at least as early as August 9,
23 2013 and no later than the filing of these Counterclaims.

24 110. Samsung also provided Huawei with an infringement claim chart for the RE'105
25 patent on or about September 7, 2013.

26 111. Because this patent was identified by Samsung as essential to the LTE standard
27 along with a corresponding infringement claim chart, Huawei knew or should have known that the
28 Accused 4G Products infringed the RE'105 patent. Huawei has nevertheless failed to engage in

1 good faith licensing discussions, on its behalf or on behalf of its affiliates, and has failed to
2 provide any FRAND counter-proposal to Samsung's proposals. Huawei's conduct falls well
3 below the standards of conduct expected of a reasonable company in the industry and renders this
4 case exceptional under 35 U.S.C. § 285.

5 112. Additional allegations regarding Huawei's knowledge of the RE'105 patent and
6 willful infringement will likely have further evidentiary support after a reasonable opportunity for
7 discovery.

8 113. Samsung is entitled to recover from Huawei all damages that Samsung has
9 sustained as a result of Huawei's infringement of the RE'105 patent, including without limitation
10 lost profits and no less than a reasonable royalty.

11 **COUNT IV**

12 **(Infringement of U.S. Patent No. 8,457,588)**

13 114. Samsung realleges and incorporate by reference the allegations set forth in the
14 foregoing paragraphs.

15 115. On June 4, 2013, the United States Patent and Trademark Office duly and legally
16 issued U.S. Patent No. 8,457,588 ("the '588 patent"), entitled "Method and apparatus for
17 discontinuous reception of connected terminal in a mobile communication system."

18 116. Samsung has owned the '588 patent since it was issued. A true and correct copy of
19 the '588 patent is attached hereto as Exhibit 22.

20 117. The inventions set forth in the '588 patent relate to using two timers to set the
21 active time of a receiver during discontinuous reception. Accordingly, the inventions provide for
22 compatibility of discontinuous reception, which saves power, with the connected UE operation
23 required by the LTE system.

24 118. The use of mandatory portions of the LTE standard infringes the '588 patent. For
25 example, the LTE standard 3GPP TS 36.321 (including v8.8.0, and all subsequent releases and
26 versions), including in particular Section 5.7, requires that, in discontinuous reception (DRX)
27 operation, terminals set the Active Time for monitoring the Physical Downlink Control Channel
28

1 (as specified in the 3GPP TS 36.300 v8.7 in Section 5.1.3) using two timers: the onDurationTimer
2 and the drx-InactivityTimer.

3 119. The '588 patent is a continuation of U.S. Application Ser. No. 11/729,032, which
4 was filed in the U.S. Patent and Trademark Office on Mar. 28, 2007, and claims priority under 35
5 U.S.C. §119(a) to a Korean patent application filed in the Korean Intellectual Property Office on
6 Mar. 28, 2006 and on Sep. 6, 2006, which were assigned Serial Nos. 2006-27986 and 2006-85757,
7 respectively.

8 120. On January 30, 2008, Samsung declared to ETSI that one of the Korean
9 applications to which the '588 patent claims priority may be or may become essential to the LTE
10 standard 3GPP TS 36.300, as shown in Exhibit 23 attached hereto.

11 121. On September 21, 2009, Samsung declared to ETSI that U.S. Patent Application
12 Serial No. 11/729,032 to which the '588 patent claims priority (the "'032 Application"), may be or
13 may become essential to the LTE standard 3GPP TS 36.300, as shown in Exhibit 24 attached
14 hereto.

15 122. On January 21, 2015, Samsung declared to ETSI that U.S. Application Ser. No.
16 13/909,605, which is a continuation of U.S. Application Ser. No. 13/608,590, which was filed in
17 the U.S. Patent and Trademark Office on Sep. 10, 2012 (the "'590 Application"), which is a
18 continuation of the '032 Application, may be or may become essential to the LTE standard 3GPP
19 TS 36.321, as shown in Exhibit 25 attached hereto.

20 123. On December 18, 2015, Samsung also declared to ETSI that U.S. Application Ser.
21 No. 14/750,583, which is a continuation of the '590 Application, which is a continuation of the
22 '032 Application, may be or may become essential to the LTE standard 3GPP TS 36.321 as shown
23 in Exhibit 26 attached hereto.

24 124. On information and belief, Huawei's Accused 4G Products use the mandatory
25 portions of the LTE standard.

26 125. Based on the use of the mandatory portions of the LTE standard, Huawei's
27 Accused 4G products infringe the '588 patent. For example, the claims of the '588 patent,
28

1 including but not limited to claims 1 and 7, read on the LTE standard as shown on Exhibit 27
2 attached hereto.

3 126. On information and belief, Huawei has directly infringed and continues to directly
4 infringe at least claims 1 and 7 of the '588 patent pursuant to 35 U.S.C. § 271(a), literally or under
5 the doctrine of equivalents, by using, selling, offering to sell, and importing into the United States
6 the Accused 4G Products, on or after the issuance date of the patent.

7 127. Additionally, Huawei has been, and currently is, indirectly infringing at least
8 claims 1 and 7 of the '588 patent by inducing infringement under 35 U.S.C. § 271(b) and as a
9 contributory infringer under 35 U.S.C. § 271(c).

10 128. Huawei knew of the '588 patent, or should have known of the '588 patent but was
11 willfully blind to its existence.

12 129. Huawei has had actual knowledge of the '588 patent since at least as early as the
13 filing of these Counterclaims.

14 130. Additionally, on or before September 7, 2013, Samsung notified Huawei of its
15 infringement by providing Huawei with a list of Samsung patents essential to practicing the LTE
16 standard.

17 131. Huawei has provided the Accused 4G Products to its customers and instructions to
18 use the Accused 4G Products in an infringing manner while being on notice of or willfully blind to
19 the '588 patent and its infringement thereof. Therefore, Huawei knew or should have known of
20 the '588 patent and of its own infringing acts, or deliberately took steps to avoid learning of those
21 facts.

22 132. Huawei knowingly and intentionally encourages and aids at least its end-user
23 customers to directly infringe the '588 patent.

24 133. On information and belief, Huawei provides the Accused 4G Products, which are
25 sold and specifically configured to infringe the '588 patent as described above, to end-user
26 customers so that such customers will use the Accused 4G Products in an infringing manner.

27 134. Huawei actively instructs its customers on how to use the Accused 4G Products,
28 including through product manuals and advertising.

1 135. For example, an end user of the Accused 4G Products practices the '588 patent
2 whenever using said product in an ordinary manner, such as to browse the web, utilize
3 applications that receive data over a 4G LTE network, or to receive 4G LTE downlink data (e.g.,
4 movies, pictures, etc.).

5 136. The Huawei user manual for the P8 lite, for instance, instructs users that they may
6 turn on mobile data to access and browse the internet, send and receive email, synchronize a
7 calendar, download songs and applications, receive weather updates, send and receive messages,
8 and otherwise engage in activities that require transmission and receipt of data over the network.
9 *See, e.g.*, Exhibit 16.

10 137. When used as instructed, Huawei's customers use these products to practice the
11 methods and use the apparatus of the '588 patent and directly infringe at least claims 1 and 7 of
12 the '588 patent. Huawei induces such infringement by providing the Accused 4G Products and
13 instructions to enable and facilitate infringement, knowing of, or being willfully blind to the
14 existence of the '588 patent. On information and belief, Huawei specifically intends that its
15 actions will result in infringement of at least claims 1 and 7 of the '588 patent, or subjectively
16 believes that its actions will result in infringement of the '588 patent but took deliberate actions to
17 avoid learning of those facts, as set forth above.

18 138. Huawei contributorily infringes at least claims 1 and 7 of the '588 patent by
19 providing the Accused 4G Products and/or software or hardware components thereof, that embody
20 a material part of the claimed inventions of the '588 patent, that are known by Huawei to be
21 specially made or adapted for use in an infringing manner, and are not staple articles with
22 substantial non-infringing uses. The Accused 4G Products are specially designed to infringe at
23 least claims 1 and 7 of the '588 patent, and their accused components have no substantial non-
24 infringing uses.

25 139. Samsung is entitled to recover from Huawei all damages that Samsung has
26 sustained as a result of Huawei's infringement of the '588 patent, including without limitation lost
27 profits and no less than a reasonable royalty.

28

COUNT V

(Infringement of U.S. Patent No. 8,509,350)

140. Samsung realleges and incorporate by reference the allegations set forth in the foregoing paragraphs.

141. On August 13, 2013, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,509,350 (“the ’350 patent”), entitled “Methods and Apparatus for Downlink PDSCH Power Setting.”

142. Samsung has owned the ’350 patent since it was issued. A true and correct copy of the ’350 patent is attached hereto as Exhibit 28.

143. The inventions set forth in the ’350 patent relate to utilizing signaling parameters transmitted from a base station in an OFDM wireless communications system to determine a downlink transmit power from the base station for various cell-specific configurations of antenna ports in the base station (e.g., for one, two, or four antenna port configurations). Accordingly, the inventions allow varying power levels to be utilized across different transmission antennas and different OFDM symbols, while reducing signaling overhead associated with transmission of parameters indicative of the power levels.

144. The use of mandatory portions of the LTE standard infringes the ’350 patent. For example, the LTE standard 3GPP TS 36.213 (including v8.7.0, and all subsequent releases and versions) requires that terminals perform downlink power allocation by, *inter alia*, determining a cell-specific ratio (ρ_B / ρ_A) based on a cell-specific parameter P_B signaled by higher layers of the base station and the number of cell-specific antenna ports configured at the base station, as detailed in the 3GPP TS 36.213 v8.7.0 standard at section 5.2.

145. The ’350 patent is a continuation of U.S. Patent Application Ser. No. 12/314,239, filed Dec. 5, 2008 now U.S. Pat. No. 8,238,455, and further claims priority to U.S. Provisional Patent Application 61/006,343 filed Jan. 7, 2008 and U.S. Provisional Patent Application 61/136,328 filed Aug. 28, 2008.

146. On December 30, 2008, Samsung declared to ETSI that U.S. Provisional Patent Application 61/006,343 may be or may become essential to the LTE standard 3GPP TS 36.213 as

1 shown in Exhibit 14 attached hereto. On July 2, 2010, Samsung declared U.S. Application Ser.
2 No. 12/314,239 to ETSI as essential to the LTE standard 3GPP TS 36.213 as shown in Exhibit 29
3 attached hereto.

4 147. On information and belief, Huawei's Accused 4G Products use the mandatory
5 portions of the LTE standard.

6 148. Based on the use of the mandatory portions of the LTE standard, Huawei's
7 Accused 4G Products infringe the '350 patent. For example, the claims of the '350 patent,
8 including but not limited to claims 1 and 8, read on the LTE standard as shown in Exhibit 30
9 attached hereto.

10 149. On information and belief, Huawei has directly infringed and continues to directly
11 infringe at least claims 1 and 8 of the '350 patent pursuant to 35 U.S.C. § 271(a), literally or under
12 the doctrine of equivalents, by using, selling, offering to sell, and importing into the United States
13 the Accused 4G Products, on or after the issuance date of the patent.

14 150. Additionally, Huawei has been, and currently is, indirectly infringing at least
15 claims 1 and 8 of the '350 patent by inducing infringement under 35 U.S.C. § 271(b) and as a
16 contributory infringer under 35 U.S.C. § 271(c).

17 151. Huawei knew of the '350 patent, or should have known of the '350 patent but was
18 willfully blind to its existence.

19 152. Huawei has had actual knowledge of the '350 patent since at least as early as the
20 filing of these Counterclaims.

21 153. Additionally, on or before September 7, 2013, Samsung notified Huawei of its
22 infringement by providing Huawei with a list of Samsung patents essential to practicing the LTE
23 standard, including the '350 patent, as well as an infringement claim chart for the '350 patent.

24 154. Huawei has provided the Accused 4G Products to its customers and instructions to
25 use the Accused 4G Products in an infringing manner while being on notice of or willfully blind to
26 the '350 patent and its infringement thereof. Therefore, Huawei knew or should have known of
27 the '350 patent and of its own infringing acts, or deliberately took steps to avoid learning of those
28 facts.

1 155. Huawei knowingly and intentionally encourages and aids at least its end-user
2 customers to directly infringe the '350 patent.

3 156. On information and belief, Huawei provides the Accused 4G Products, which are
4 sold and specifically configured to infringe the '350 patent as described above, to end-user
5 customers so that such customers will use the Accused 4G Products in an infringing manner.

6 157. Huawei actively instructs its customers on how to use the Accused 4G Products,
7 including through product manuals and advertising.

8 158. For example, an end user of the Accused 4G Products practices the '350 patent
9 whenever using said product in an ordinary manner, such as to browse the web, utilize
10 applications that receive data over a 4G LTE network, or to receive 4G LTE downlink data (e.g.,
11 movies, pictures, etc.).

12 159. The Huawei user manual for the P8 lite, for instance, instructs users that they may
13 turn on mobile data to access and browse the internet, send and receive email, synchronize a
14 calendar, download songs and applications, receive weather updates, send and receive messages,
15 and otherwise engage in activities that require transmission and receipt of data over the network.
16 *See, e.g.*, Exhibit 16.

17 160. When used as instructed, Huawei's customers use these products to practice the
18 methods and use the apparatus of the '350 patent and directly infringe at least claims 1 and 8 of
19 the '350 patent. Huawei induces such infringement by providing the Accused 4G Products and
20 instructions to enable and facilitate infringement, knowing of, or being willfully blind to the
21 existence of the '350 patent. On information and belief, Huawei specifically intends that its
22 actions will result in infringement of at least claims 1 and 8 of the '350 patent, or subjectively
23 believes that its actions will result in infringement of the '350 patent but took deliberate actions to
24 avoid learning of those facts, as set forth above.

25 161. Huawei contributorily infringes at least claims 1 and 8 of the '350 patent by
26 providing the Accused 4G Products and/or software or hardware components thereof, that embody
27 a material part of the claimed inventions of the '350 patent, that are known by Huawei to be
28 specially made or adapted for use in an infringing manner, and are not staple articles with

1 substantial non-infringing uses. The Accused 4G Products are specially designed to infringe at
2 least claims 1 and 8 of the '350 patent, and their accused components have no substantial non-
3 infringing uses.

4 162. Huawei's infringement of the '350 patent has been and continues to be willful, and
5 Huawei's conduct renders this case exceptional under 35 U.S.C. § 285. As set forth herein,
6 Samsung has attempted to negotiate in good faith an appropriate cross-license between the
7 companies' respective standards-related patent portfolios.

8 163. As part of these efforts, Samsung provided Huawei with a list of exemplary
9 Samsung LTE and UMTS SEPs, including the '350 patent, on or about August 9, 2013.

10 164. Huawei therefore had knowledge of the '350 patent at least as early as August 9,
11 2013 and no later than the filing of these Counterclaims.

12 165. Samsung also provided Huawei with an infringement claim chart for the '350
13 patent on or about September 7, 2013.

14 166. Because this patent was identified by Samsung as essential to the LTE standard
15 along with a corresponding infringement claim chart, Huawei knew or should have known that the
16 Accused 4G Products infringed the '350 patent. Huawei has nevertheless failed to engage in good
17 faith licensing discussions, on its behalf or on behalf of its affiliates, and has failed to provide any
18 FRAND counter-proposal to Samsung's proposals. Huawei's conduct falls well below the
19 standards of conduct expected of a reasonable company in the industry and renders this case
20 exceptional under 35 U.S.C. § 285.

21 167. Additional allegations regarding Huawei's knowledge of the '350 patent and
22 willful infringement will likely have further evidentiary support after a reasonable opportunity for
23 discovery.

24 168. Samsung is entitled to recover from Huawei all damages that Samsung has
25 sustained as a result of Huawei's infringement of the '350 patent, including without limitation lost
26 profits and no less than a reasonable royalty.

27
28

COUNT VI

(Infringement of U.S. Patent No. 9,113,419)

169. Samsung realleges and incorporate by reference the allegations set forth in the foregoing paragraphs.

170. On August 18, 2015, the United States Patent and Trademark Office duly and legally issued the '419 patent, entitled "Methods and apparatus for downlink PDSCH power setting."

171. Samsung has owned the '419 patent since it was issued. A true and correct copy of the '419 patent is attached hereto as Exhibit 31.

172. The inventions set forth in the '419 patent relate to utilizing signaling parameters transmitted from a base station in an OFDM wireless communications system to determine a downlink transmit power from the base station for various cell-specific configurations of antenna ports in the base station (e.g., for one, two, or four antenna port configurations). Accordingly, the inventions allow varying power levels to be utilized across different transmission antennas and different OFDM symbols, while reducing signaling overhead associated with transmission of parameters indicative of the power levels.

173. The use of mandatory portions of the LTE standard infringes the '419 patent. For example, the LTE standard 3GPP TS 36.213 (including v8.7.0, and all subsequent releases and versions) requires that terminals perform downlink power allocation by, *inter alia*, determining a cell-specific ratio (ρ_B / ρ_A) based on a cell-specific parameter P_B signaled by higher layers of the base station and the number of cell-specific antenna ports configured at the base station, as detailed in the 3GPP TS 36.213 v8.7.0 standard at section 5.2 and in Table 5.2-1, which sets forth the specific values of the ρ_B / ρ_A ratio that correspond to 0, 1, 2, and 3 values of the parameter P_B (i.e., 1, 4/5, 3/5, and 2/5, respectively, for one antenna port configurations at the base station; and 5/4, 1, 3/4, and 1/2, respectively, for two and four antenna port configurations).

174. The '419 patent is a continuation of U.S. Patent Application Ser. No. 13/541,293 filed Jul. 3, 2012, now U.S. Pat. No. 8,509,350, which is a continuation of U.S. Patent Application Ser. No. 12/314,239 filed Dec. 5, 2008, now U.S. Pat. No. 8,238,455, and further claims priority to

1 U.S. Provisional Patent Application 61/006,343 filed Jan. 7, 2008 and U.S. Provisional Patent
2 Application 61/136,328 filed Aug. 28, 2008.

3 175. On December 30, 2008, Samsung declared to ETSI that U.S. Provisional Patent
4 Application 61/006,343 may be or may become essential to the LTE standard 3GPP TS 36.213 as
5 shown in Exhibit 14 attached hereto.

6 176. On July 2, 2010, Samsung declared to ETSI that U.S. Application Ser. No.
7 12/314,239 may be or may become essential to the LTE standard 3GPP TS 36.213 as shown in
8 Exhibit 29 attached hereto.

9 177. On information and belief, Huawei's Accused 4G Products use the mandatory
10 portions of the LTE standard.

11 178. Based on the use of the mandatory portions of the LTE standard, Huawei's
12 Accused 4G Products infringe the '419 patent. For example, the claims of the '419 patent,
13 including but not limited to claims 1 and 6, read on the LTE standard as shown in Exhibit 32
14 attached hereto.

15 179. On information and belief, Huawei has directly infringed and continues to directly
16 infringe at least claims 1 and 6 of the '419 patent pursuant to 35 U.S.C. § 271(a), literally or under
17 the doctrine of equivalents, by using, selling, offering to sell, and importing into the United States
18 the Accused 4G Products, on or after the issuance date of the patent.

19 180. Additionally, Huawei has been, and currently is, indirectly infringing at least
20 claims 1 and 6 of the '419 patent by inducing infringement under 35 U.S.C. § 271(b) and as a
21 contributory infringer under 35 U.S.C. § 271(c).

22 181. Huawei knew of the '419 patent, or should have known of the '419 patent but was
23 willfully blind to its existence.

24 182. Huawei has had actual knowledge of the '419 patent since at least as early as the
25 filing of these Counterclaims.

26 183. Additionally, on or before September 7, 2013, Samsung provided Huawei with
27 notices of other patents in the '419 patent family by providing Huawei with a list of Samsung
28

1 patents essential to practicing the LTE standard, including the '350 patent, which is a parent patent
2 to the '419 patent, as well as an infringement claim chart for the '350 patent.

3 184. Huawei has provided the Accused 4G Products to its customers and instructions to
4 use the Accused 4G Products in an infringing manner while being on notice of or willfully blind to
5 the '419 patent and its infringement thereof. Therefore, Huawei knew or should have known of
6 the '419 patent and of its own infringing acts, or deliberately took steps to avoid learning of those
7 facts.

8 185. Huawei knowingly and intentionally encourages and aids at least its end-user
9 customers to directly infringe the '419 patent.

10 186. On information and belief, Huawei provides the Accused 4G Products, which are
11 sold and specifically configured to infringe the '419 patent as described above, to end-user
12 customers so that such customers will use the Accused 4G Products in an infringing manner.

13 187. Huawei actively instructs its customers on how to use the Accused 4G Products,
14 including through product manuals and advertising.

15 188. For example, an end user of the Accused 4G Products practices the '419 patent
16 whenever using said product in an ordinary manner, such as to browse the web, utilize
17 applications that receive data over a 4G LTE network, or to receive 4G LTE downlink data (e.g.,
18 movies, pictures, etc.).

19 189. The Huawei user manual for the P8 lite, for instance, instructs users that they may
20 turn on mobile data to access and browse the internet, send and receive email, synchronize a
21 calendar, download songs and applications, receive weather updates, send and receive messages,
22 and otherwise engage in activities that require transmission and receipt of data over the network.
23 *See, e.g.*, Exhibit 16.

24 190. When used as instructed, Huawei's customers use these products to practice the
25 methods and use the apparatus of the '419 patent and directly infringe at least claims 1 and 6 of
26 the '419 patent. Huawei induces such infringement by providing the Accused 4G Products and
27 instructions to enable and facilitate infringement, knowing of, or being willfully blind to the
28 existence of the '419 patent. On information and belief, Huawei specifically intends that its

1 actions will result in infringement of at least claims 1 and 6 of the '419 patent, or subjectively
2 believes that its actions will result in infringement of the '419 patent but took deliberate actions to
3 avoid learning of those facts, as set forth above.

4 191. Huawei contributorily infringes at least claims 1 and 6 of the '419 patent by
5 providing the Accused 4G Products and/or software or hardware components thereof, that embody
6 a material part of the claimed inventions of the '419 patent, that are known by Huawei to be
7 specially made or adapted for use in an infringing manner, and are not staple articles with
8 substantial non-infringing uses. The Accused 4G Products are specially designed to infringe at
9 least claims 1 and 6 of the '419 patent, and their accused components have no substantial non-
10 infringing uses.

11 192. Samsung is entitled to recover from Huawei all damages that Samsung has
12 sustained as a result of Huawei's infringement of the '419 patent, including without limitation lost
13 profits and no less than a reasonable royalty.

14 **COUNT VII**

15 **(Infringement of U.S. Patent No. 8,619,726)**

16 193. Samsung realleges and incorporate by reference the allegations set forth in the
17 foregoing paragraphs.

18 194. On December 31, 2013, the United States Patent and Trademark Office duly and
19 legally issued U.S. Patent No. 8,619,726 ("the '726 patent"), entitled "Apparatus and method for
20 transmitting and receiving packets in a mobile communication system supporting hybrid automatic
21 repeat request."

22 195. Samsung has owned the '726 patent since it was issued. A true and correct copy of
23 the '726 patent is attached hereto as Exhibit 33.

24 196. The inventions set forth in the '726 patent relate to operating Hybrid Automatic
25 Repeat reQuest (HARQ) in a mobile communication system, including calculating a HARQ
26 process identifier (ID) using the number of HARQ processes of the persistent resource allocation,
27 the persistent resource allocation interval information, and time information; and associating a
28 HARQ process with the calculated HARQ process ID. Accordingly, the inventions provide

1 identification of retransmitted packets for persistent resources without the need to transmit HARQ
2 process identifiers.

3 197. The use of mandatory portions of the LTE standard infringes the '726 patent. For
4 example, the LTE standard 3GPP TS 36.321 (including v8.7.0, and all subsequent releases and
5 versions) requires that terminals derive a HARQ Process ID using the semi-persistent scheduling
6 interval, the number of configured semi-persistent scheduling HARQ processes, and time
7 information, as specified in the 3GPP TS 36.211 v8.7.0 standard at section 5.3.1.

8 198. The '726 patent is a continuation of U.S. Ser. No. 12/187,762, which was filed in
9 the U.S. Patent and Trademark Office on Aug. 7, 2008, and claims priority under 35 U.S.C.
10 §119(a) to Korean Patent Application Nos. 2007-79246 and 2007-113640, which were filed in the
11 Korean Intellectual Property Office on Aug. 7, 2007 and Nov. 8, 2007, respectively.

12 199. On September 15, 2009, Samsung declared to ETSI that U.S. Application No.
13 12/187,762, the application to which the '726 is a continuation of and claims priority, may be or
14 may become essential to the LTE standard 3GPP TS 36.321, section 5.3.1 as shown in Exhibit 34
15 attached hereto.

16 200. On information and belief, Huawei's Accused 4G Products use the mandatory
17 portions of the LTE standard.

18 201. Based on the use of the mandatory portions of the LTE standard, Huawei's
19 Accused 4G Products infringe the '726 patent. For example, the claims of the '726 patent,
20 including but not limited to claims 1 and 11, read on the LTE standard as shown on Exhibit 35
21 attached hereto.

22 202. On information and belief, Huawei has directly infringed and continues to directly
23 infringe at least claims 1 and 11 of the '726 patent pursuant to 35 U.S.C. § 271(a), literally or
24 under the doctrine of equivalents, by using, selling, offering to sell, and importing into the United
25 States the Accused 4G Products, on or after the issuance date of the patent.

26 203. Additionally, Huawei has been, and currently is, indirectly infringing at least
27 claims 1 and 11 of the '726 patent by inducing infringement under 35 U.S.C. § 271(b) and as a
28 contributory infringer under 35 U.S.C. § 271(c).

1 204. Huawei knew of the '726 patent, or should have known of the '726 patent but was
2 willfully blind to its existence.

3 205. Huawei has had actual knowledge of the '726 patent since at least as early as the
4 filing of these Counterclaims.

5 206. Additionally, on or before September 7, 2013, Samsung notified Huawei of its
6 infringement by providing Huawei with a list of Samsung patents essential to practicing the LTE
7 standard, including the U.S. Pat. No. 8,270,932 (the "'932 patent"), which is a parent patent to the
8 '588 patent, as well as an infringement claim chart for the '932 patent.

9 207. Huawei has provided the Accused 4G Products to its customers and instructions to
10 use the Accused 4G Products in an infringing manner while being on notice of or willfully blind to
11 the '726 patent and its infringement thereof. Therefore, Huawei knew or should have known of
12 the '726 patent and of its own infringing acts, or deliberately took steps to avoid learning of those
13 facts.

14 208. Huawei knowingly and intentionally encourages and aids at least its end-user
15 customers to directly infringe the '726 patent.

16 209. On information and belief, Huawei provides the Accused 4G Products, which are
17 sold and specifically configured to infringe the '726 patent as described above, to end-user
18 customers so that such customers will use the Accused 4G Products in an infringing manner.

19 210. Huawei actively instructs its customers on how to use the Accused 4G Products,
20 including through product manuals and advertising.

21 211. For example, an end user of the Accused 4G Products practices the '726 patent
22 whenever using said product in an ordinary manner, such as to browse the web, utilize
23 applications that receive data over a 4G LTE network, or to receive 4G LTE downlink data (e.g.,
24 movies, pictures, etc.).

25 212. The Huawei user manual for the P8 lite, for instance, instructs users that they may
26 turn on mobile data to access and browse the internet, send and receive email, synchronize a
27 calendar, download songs and applications, receive weather updates, send and receive messages,
28

1 218. Samsung has owned the '130 patent since it was issued. A true and correct copy of
2 the '130 patent is attached hereto as Exhibit 36.

3 219. The inventions set forth in the '130 patent relate to multiplexing control
4 information bits and data information bits into sub-frame symbols depending on the location of
5 symbols carrying a reference signal (RS), to provide an estimate for the channel medium and
6 enable coherent demodulation for signals carrying information bits. Accordingly, the inventions
7 provide for improved reception reliability of control information bits.

8 220. The use of mandatory portions of the LTE standard infringes the '130 patent. For
9 example, the LTE standard 3GPP TS 36.212 (including v8.7.0, and all subsequent releases and
10 versions) requires that HARQ-ACK information is present on both slots in the subframe and is
11 mapped to resources around the uplink demodulation reference signals, as specified in the 3GPP
12 TS 36.212 v8.7.0 standard at section 5.2.

13 221. The '130 is a continuation application of U.S. Application Ser. No. 12/133,120,
14 filed on Jun. 4, 2008 which claims priority to U.S. Provisional Application No. 60/942,843, filed
15 Jun. 8, 2007, now U.S. Pat. No. 8,331,328.

16 222. On January 21, 2015, Samsung declared to ETSI that the '130 patent may be or
17 may become essential to the LTE standard 3GPP TS 36.212 as shown in Exhibit 25 attached
18 hereto.

19 223. On information and belief, Huawei's Accused 4G Products use the mandatory
20 portions of the LTE standard.

21 224. Based on the use of the mandatory portions of the LTE standard, Huawei's
22 Accused 4G Products infringe the '130 patent. For example, the claims of the '130 patent,
23 including but not limited to claims 9 and 13, read on the LTE standard as shown on Exhibit 37
24 attached hereto.

25 225. On information and belief, Huawei has directly infringed and continue to directly
26 infringe at least claims 9 and 13 of the '130 patent pursuant to 35 U.S.C. § 271(a), literally or
27 under the doctrine of equivalents, by using, selling, offering to sell, and importing into the United
28 States the Accused 4G Products, on or after the issuance date of the patent.

1 226. Additionally, Huawei has been, and currently is, indirectly infringing at least
2 claims 9 and 13 of the '130 patent by inducing infringement under 35 U.S.C. § 271(b) and as a
3 contributory infringer under 35 U.S.C. § 271(c).

4 227. Huawei knew of the '130 patent, or should have known of the '130 patent but was
5 willfully blind to its existence.

6 228. Huawei has had actual knowledge of the '130 patent since at least as early as the
7 filing of these Counterclaims.

8 229. Additionally, on or before September 7, 2013, Samsung notified Huawei of its
9 infringement by providing Huawei with a list of Samsung patents essential to practicing the LTE
10 standard, U.S. Pat. No. 8,331,328 (the "'328 patent"), which is a parent patent to the '130 patent,
11 as well as an infringement claim chart for the '328 patent.

12 230. Huawei has provided the Accused 4G Products to its customers and instructions to
13 use the Accused 4G Products in an infringing manner while being on notice of or willfully blind to
14 the '130 patent and its infringement thereof. Therefore, Huawei knew or should have known of
15 the '130 patent and of its own infringing acts, or deliberately took steps to avoid learning of those
16 facts.

17 231. Huawei knowingly and intentionally encourages and aids at least its end-user
18 customers to directly infringe the '130 patent.

19 232. On information and belief, Huawei provides the Accused 4G Products, which are
20 sold and specifically configured to infringe the '130 patent as described above, to end-user
21 customers so that such customers will use the Accused 4G Products in an infringing manner.

22 233. Huawei actively instructs its customers on how to use the Accused 4G Products,
23 including through product manuals and advertising.

24 234. For example, an end user of the Accused 4G Products practices the '130 patent
25 whenever using said product in an ordinary manner, such as to browse the web, utilize
26 applications that receive data over a 4G LTE network, or to receive 4G LTE downlink data (e.g.,
27 movies, pictures, etc.).
28

1 240. On March 15, 2016, the United States Patent and Trademark Office duly and
2 legally issued U.S. Patent No. 9,288,825 (“the ’825 patent”), entitled “Method and apparatus for
3 initiating communications on a shared channel in a mobile communications system.”

4 241. Samsung has owned the ’825 patent since it was issued. A true and correct copy of
5 the ’825 patent is attached hereto as Exhibit 38.

6 242. The inventions set forth in the ’825 patent relate to initiating communication over a
7 shared channel that allows for an initial downlink message to be transmitted over the shared
8 channel (as opposed to requiring a dedicated channel). Accordingly, the inventions simplify the
9 initiating of shared channel communication and improve bandwidth by obviating the need for
10 certain dedicated channel resources.

11 243. The use of mandatory portions of the LTE standard infringes the ’825 patent. For
12 example, the LTE standard 3GPP TS 36.321 (including v8.7.0, and all subsequent releases and
13 versions) requires that terminals receive from base stations a group of Random Access Preambles
14 (as specified in the 3GPP TS 36.331 v8.7.0 standard). Furthermore, the LTE standard 3GPP TS
15 36.21 requires selecting one of the group of Preambles, and transmitting the select Preamble to a
16 base station as specified in the 3GPP TS 36.321 v8.7.0 standard at section 5.1.3, and after a
17 predetermined delay, monitoring the PDCCH downlink channel to determine whether a downlink
18 signal has been received, and then transmitting a second uplink signal if the downlink signal has
19 been received.

20 244. On January 21, 2015, Samsung declared to ETSI that the application that led to
21 issuance of the ’825 patent may be or may become essential to the LTE standard 3GPP TS 36.321,
22 as shown in Exhibit 25 attached hereto.

23 245. On information and belief, Huawei’s Accused 4G Products use the mandatory
24 portions of the LTE standard.

25 246. Based on the use of the mandatory portions of the LTE standard, Huawei’s
26 Accused 4G Products infringe the ’825 patent. For example, the claims of the ’825 patent,
27 including but not limited to claims 1 and 4, read on the LTE standard as shown on Exhibit 39
28 attached hereto.

1 247. On information and belief, Huawei has directly infringed and continues to directly
2 infringe at least claims 1 and 4 of the '825 patent pursuant to 35 U.S.C. § 271(a), literally or under
3 the doctrine of equivalents, by using, selling, offering to sell, and importing into the United States
4 the Accused 4G Products, on or after the issuance date of the patent.

5 248. Additionally, Huawei has been, and currently is, indirectly infringing at least
6 claims 1 and 4 of the '825 patent by inducing infringement under 35 U.S.C. § 271(b) and as a
7 contributory infringer under 35 U.S.C. § 271(c).

8 249. Huawei knew of the '825 patent, or should have known of the '825 patent but was
9 willfully blind to its existence.

10 250. Huawei has had actual knowledge of the '825 patent since at least as early as the
11 filing of these Counterclaims.

12 251. Additionally, on or before September 7, 2013, Samsung notified Huawei of its
13 infringement by providing Huawei with a list of Samsung patents essential to practicing the LTE
14 standard.

15 252. Huawei has provided the Accused 4G Products to its customers and instructions to
16 use the Accused 4G Products in an infringing manner while being on notice of or willfully blind to
17 the '825 patent and its infringement thereof. Therefore, Huawei knew or should have known of
18 the '825 patent and of its own infringing acts, or deliberately took steps to avoid learning of those
19 facts.

20 253. Huawei knowingly and intentionally encourages and aids at least its end-user
21 customers to directly infringe the '825 patent.

22 254. On information and belief, Huawei provides the Accused 4G Products, which are
23 sold and specifically configured to infringe the '825 patent as described above, to end-user
24 customers so that such customers will use the Accused 4G Products in an infringing manner.

25 255. Huawei actively instructs its customers on how to use the Accused 4G Products,
26 including through product manuals and advertising.

27 256. For example, an end user of the Accused 4G Products practices the '825 patent
28 whenever using said product in an ordinary manner, such as to browse the web, utilize

1 applications that receive data over a 4G LTE network, or to receive 4G LTE downlink data (e.g.,
2 movies, pictures, etc.).

3 257. The Huawei user manual for the P8 lite, for instance, instructs users that they may
4 turn on mobile data to access and browse the internet, send and receive email, synchronize a
5 calendar, download songs and applications, receive weather updates, send and receive messages,
6 and otherwise engage in activities that require transmission and receipt of data over the network.
7 *See, e.g.*, Exhibit 16.

8 258. When used as instructed, Huawei's customers use these products to practice the
9 methods and use the apparatus of the '825 patent and directly infringe at least claims 1 and 4 of
10 the '825 patent. Huawei induces such infringement by providing the Accused 4G Products and
11 instructions to enable and facilitate infringement, knowing of, or being willfully blind to the
12 existence of the '825 patent. On information and belief, Huawei specifically intends that its
13 actions will result in infringement of at least claims 1 and 4 of the '825 patent, or subjectively
14 believes that its actions will result in infringement of the '825 patent but took deliberate actions to
15 avoid learning of those facts, as set forth above.

16 259. Huawei contributorily infringes at least claims 1 and 4 of the '825 patent by
17 providing the Accused 4G Products and/or software or hardware components thereof, that embody
18 a material part of the claimed inventions of the '825 patent, that are known by Huawei to be
19 specially made or adapted for use in an infringing manner, and are not staple articles with
20 substantial non-infringing uses. The Accused 4G Products are specially designed to infringe at
21 least claims 1 and 4 of the '825 patent, and their accused components have no substantial non-
22 infringing uses.

23 260. Samsung is entitled to recover from Huawei all damages that Samsung has
24 sustained as a result of Huawei's infringement of the '825 patent, including without limitation lost
25 profits and no less than a reasonable royalty.

26
27
28

COUNT X

(Infringement of U.S. Patent No. 7,706,348)

261. Samsung realleges and incorporate by reference the allegations set forth in the foregoing paragraphs.

262. On April 27, 2010, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 7,706,348 (“the ’348 patent”), entitled “Apparatus and method for encoding/decoding transport format combination indicator in CDMA mobile communication system.”

263. Samsung has owned the ’348 patent since it was issued. A true and correct copy of the ’348 patent is attached hereto as Exhibit 40.

264. The inventions set forth in the ’348 patent relate to encoding (or decoding) a transport format combination indicator (TFCI) in a more efficient and robust manner. These inventions allow the user equipment to simplify, while adequately protecting, the transmission of this information.

265. The use of mandatory portions of the LTE standard infringes the ’348 patent. For example, the UMTS standard 3GPP TS 25.212 (including v3.9.0, and all subsequent releases and versions) requires that terminals that output a 32-bit codeword that corresponds to a 10-bit TFCI information input and puncture two bits from the 32-bit codeword, as specified in the 3GPP TS 25.212 v3.9.0 standard at section 4.3.3.

266. The ’348 patent is a continuation of U.S. Patent Application Ser. No. 09/611,069, filed Jul. 6, 2000 now U.S. Pat. No. 6,882,636, which claims priority under 35 U.S.C. §119 to an application entitled “Apparatus And Method For Encoding/Decoding Transport Format Combination Indicator In CDMA Mobile Communication System” filed in the Korean Intellectual Property Office on Jul. 6, 1999 and assigned Serial No. 1999-27932.

267. On December 31, 2003, Samsung declared to ETSI that U.S. Application Ser. No. 09/611,069 may be or may become essential to the UMTS standard 3GPP TS 25.212 as shown in Exhibit 41 attached hereto.

1 268. On October 20, 2011, Samsung declared to ETSI that U.S. Patent No. 6,882,636
2 may be or maybe become essential to the UMTS standard 36.211 as shown in Exhibit 42 attached
3 hereto.

4 269. On information and belief, Huawei's Accused UMTS Products use the mandatory
5 portions of the UMTS standard.

6 270. Based on the use of the mandatory portions of the UMTS standard, Huawei's
7 Accused UMTS Products infringe the '348 patent. For example, the claims of the '348 patent,
8 including but not limited to claims 75 and 82, read on the UMTS standard as shown on Exhibit 43
9 attached hereto.

10 271. On information and belief, Huawei has directly infringed and continues to directly
11 infringe at least claims 75 and 82 of the '348 patent pursuant to 35 U.S.C. § 271(a), literally or
12 under the doctrine of equivalents, by using, selling, offering to sell, and importing into the United
13 States the Accused UMTS Products, on or after the issuance date of the patent.

14 272. Additionally, Huawei has been, and currently is, indirectly infringing at least
15 claims 75 and 82 of the '348 patent by inducing infringement under 35 U.S.C. § 271(b) and as a
16 contributory infringer under 35 U.S.C. § 271(c).

17 273. Huawei knew of the '348 patent, or should have known of the '348 patent but was
18 willfully blind to its existence.

19 274. Huawei has had actual knowledge of the '348 patent since at least as early as the
20 filing of these Counterclaims.

21 275. Additionally, on or before September 7, 2013, Samsung notified Huawei of its
22 infringement by providing Huawei with a list of Samsung patents essential to practicing the
23 UMTS and LTE standards, including the '348 patent, as well as an infringement claim chart for
24 the '348 patent.

25 276. Huawei has provided the Accused UMTS Products to its customers and instructions
26 to use the Accused UMTS Products in an infringing manner while being on notice of or willfully
27 blind to the '348 patent and its infringement thereof. Therefore, Huawei knew or should have
28

1 known of the '348 patent and of its own infringing acts, or deliberately took steps to avoid
2 learning of those facts.

3 277. Huawei knowingly and intentionally encourages and aids at least its end-user
4 customers to directly infringe the '348 patent.

5 278. On information and belief, Huawei provides the Accused UMTS Products, which
6 are sold and specifically configured to infringe the '348 patent as described above, to end-user
7 customers so that such customers will use the Accused UMTS Products in an infringing manner.

8 279. Huawei actively instructs its customers on how to use the Accused UMTS
9 Products, including through product manuals and advertising.

10 280. For example, an end user of the Accused UMTS Products practices the '348 patent
11 whenever using said product in an ordinary manner, such as to browse the web, utilize
12 applications that receive data over a 3G UMTS network, or to receive 3G UMTS downlink data
13 (e.g., movies, pictures, etc.).

14 281. The Huawei user manual for the P8 lite, for instance, instructs users that they may
15 turn on mobile data to access and browse the internet, send and receive email, synchronize a
16 calendar, download songs and applications, receive weather updates, send and receive messages,
17 and otherwise engage in activities that require transmission and receipt of data over the network.
18 *See, e.g.,* Exhibit 16.

19 282. When used as instructed, Huawei's customers use these products to practice the
20 methods and use the apparatus of the '348 patent and directly infringe at least claims 75 and 82 of
21 the '348 patent. Huawei induces such infringement by providing the Accused UMTS Products
22 and instructions to enable and facilitate infringement, knowing of, or being willfully blind to the
23 existence of the '348 patent. On information and belief, Huawei specifically intends that its
24 actions will result in infringement of at least claims 75 and 82 of the '348 patent, or subjectively
25 believes that its actions will result in infringement of the '348 patent but took deliberate actions to
26 avoid learning of those facts, as set forth above.

27 283. Huawei contributorily infringes at least claims 75 and 82 of the '348 patent by
28 providing the Accused UMTS Products and/or software or hardware components thereof, that

1 embody a material part of the claimed inventions of the '348 patent, that are known by Huawei to
2 be specially made or adapted for use in an infringing manner, and are not staple articles with
3 substantial non-infringing uses. The Accused UMTS Products are specially designed to infringe
4 at least claims 75 and 82 of the '348 patent, and their accused components have no substantial
5 non-infringing uses.

6 284. Huawei's infringement of the '348 patent has been and continues to be willful, and
7 Huawei's conduct renders this case exceptional under 35 U.S.C. § 285. As set forth herein,
8 Samsung has attempted to negotiate in good faith an appropriate cross-license between the
9 companies' respective standards-related patent portfolios.

10 285. As part of these efforts, Samsung provided Huawei with a list of exemplary
11 Samsung LTE and UMTS SEPs, including the '348 patent, on or about August 9, 2013.

12 286. Huawei therefore had knowledge of the '348 patent at least as early as August 9,
13 2013 and no later than the filing of these Counterclaims.

14 287. Samsung also provided Huawei with an infringement claim chart for the '348
15 patent on or about September 7, 2013.

16 288. Because this patent was identified by Samsung as essential to the UMTS standard
17 along with a corresponding infringement claim chart, Huawei knew or should have known that the
18 Accused UMTS Products infringed the '348 patent. Huawei has nevertheless failed to engage in
19 good faith licensing discussions, on its behalf or on behalf of its affiliates, and has failed to
20 provide any FRAND counter-proposal to Samsung's proposals. Huawei's conduct falls well
21 below the standards of conduct expected of a reasonable company in the industry and renders this
22 case exceptional under 35 U.S.C. § 285.

23 289. Additional allegations regarding Huawei's knowledge of the '348 patent and
24 willful infringement will likely have further evidentiary support after a reasonable opportunity for
25 discovery.

26 290. Samsung is entitled to recover from Huawei all damages that Samsung has
27 sustained as a result of Huawei's infringement of the '348 patent, including without limitation lost
28 profits and no less than a reasonable royalty.

COUNT XI**(Infringement of U.S. Patent No. 8,995,924)**

291. Samsung realleges and incorporate by reference the allegations set forth in the foregoing paragraphs.

292. On March 31, 2015, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,995,924 (“the ’924 patent”), entitled “Method for configuring gain factors for uplink service in radio telecommunication system.”

293. Samsung has owned the ’924 patent since it was issued. A true and correct copy of the ’924 patent is attached hereto as Exhibit 44.

294. The inventions set forth in the ’924 patent relates to computing a gain factor for Transport Format Combinations (TFCs) in user equipment (UE) on a wireless communication network. The inventions provide that the gain factor for a TFC may be computed based on a gain factor received by the UE for a reference TFC, wherein the UE determines which reference TFC corresponds to the TFC for which a gain factor is being computed based on a predetermined rule. Accordingly, the inventions allow UEs to compute gain factors for a number of TFCs without relying on those values being communicated over the wireless network, which thereby reduces signaling overhead and congestion on the network.

295. The use of mandatory portions of the UMTS standard infringes the ’924 patent. For example, the UMTS standard 3GPP TS 25.214 (including v7.4.0, and all subsequent releases and versions) requires that user equipment receive information related to reference gain factors that are subsequently utilized to compute the gain factor for other TFCs. According to the standard, the gain factor for a non-reference TFC is calculated based on a corresponding signaled gain factor for its associated reference TFC, said reference TFC being identified by the UE based on application of a predetermined rule, as specified in the 3GPP TS 25.214 v7.4.0 standard at section 5.1.2.5B2.3.

296. The ’924 patent is a continuation of U.S. Patent Application Ser. No. 12/585,228, filed on Sep. 9, 2009, now U.S. Pat. No. 8,391,910, which is a continuation of U.S. Patent Application Ser. No. 11/326,595, filed on Jan. 6, 2006, now U.S. Pat. No. 7,668,563, which in

1 turns claims priority under 35 U.S.C. §119(a) to applications entitled “Method for Configuring
2 Gain Factors for Uplink Service in Radio Telecommunication System” filed in the Korean
3 Industrial Property Office on Jan. 6, 2005 and Feb. 4, 2005 and assigned Serial Nos. 2005-
4 0001400 and 2005-0010868, respectively.

5 297. On May 16, 2006, Samsung declared to ETSI that U.S. Application Ser. No.
6 11/326,595 and Korean application Ser. No. 2005-1400 may be or may become essential to the
7 UMTS standard 3GPP TS 25.214 as shown in Exhibit 45 attached hereto.

8 298. On information and belief, Huawei’s Accused UMTS Products use the mandatory
9 portions of the UMTS standard.

10 299. Based on the use of the mandatory portions of the UMTS standard, Huawei’s
11 Accused UMTS Products infringe the ’924 patent. For example, the claims of the ’924 patent,
12 including but not limited to claims 1 and 5, read on the UMTS standard as shown on Exhibit 46
13 attached hereto.

14 300. On information and belief, Huawei has directly infringed and continues to directly
15 infringe at least claims 1 and 5 of the ’924 patent pursuant to 35 U.S.C. § 271(a), literally or under
16 the doctrine of equivalents, by using, selling, offering to sell, and importing into the United States
17 the Accused UMTS Products, on or after the issuance date of the patent.

18 301. Additionally, Huawei has been, and currently is, indirectly infringing at least
19 claims 1 and 5 of the ’924 patent by inducing infringement under 35 U.S.C. § 271(b) and as a
20 contributory infringer under 35 U.S.C. § 271(c).

21 302. Huawei knew of the ’924 patent, or should have known of the ’924 patent but was
22 willfully blind to its existence.

23 303. Huawei has had actual knowledge of the ’924 patent since at least as early as the
24 filing of these Counterclaims.

25 304. Additionally, on or before September 7, 2013, Samsung provided Huawei with
26 notice of other patents in the ’924 patent family by providing Huawei with a list of Samsung
27 patents essential to practicing the UMTS standard, including U.S. Pat. Nos. 8,391,910 and
28

1 7,668,563, which are parent patents to the '924 patent, as well as an infringement claim chart for
2 each.

3 305. Huawei has provided the Accused UMTS Products to its customers and instructions
4 to use the Accused UMTS Products in an infringing manner while being on notice of or willfully
5 blind to the '924 patent and its infringement thereof. Therefore, Huawei knew or should have
6 known of the '924 patent and of its own infringing acts, or deliberately took steps to avoid
7 learning of those facts.

8 306. Huawei knowingly and intentionally encourages and aids at least its end-user
9 customers to directly infringe the '924 patent.

10 307. On information and belief, Huawei provides the Accused UMTS Products, which
11 are sold and specifically configured to infringe the '924 patent as described above, to end-user
12 customers so that such customers will use the Accused UMTS Products in an infringing manner.

13 308. Huawei actively instructs its customers on how to use the Accused UMTS
14 Products, including through product manuals and advertising.

15 309. For example, an end user of the Accused UMTS Products practices the '924 patent
16 whenever using said product in an ordinary manner, such as to browse the web, utilize
17 applications that receive data over a 3G UMTS network, or to receive 3G UMTS downlink data
18 (e.g., movies, pictures, etc.).

19 310. The Huawei user manual for the P8 lite, for instance, instructs users that they may
20 turn on mobile data to access and browse the internet, send and receive email, synchronize a
21 calendar, download songs and applications, receive weather updates, send and receive messages,
22 and otherwise engage in activities that require transmission and receipt of data over the network.
23 *See, e.g.*, Exhibit 16.

24 311. When used as instructed, Huawei's customers use these products to practice the
25 methods and use the apparatus of the '924 patent and directly infringe at least claims 1 and 5 of
26 the '924 patent. Huawei induces such infringement by providing the Accused UMTS Products
27 and instructions to enable and facilitate infringement, knowing of, or being willfully blind to the
28 existence of the '924 patent. On information and belief, Huawei specifically intends that its

1 actions will result in infringement of at least claims 1 and 4 of the '924 patent, or subjectively
2 believes that its actions will result in infringement of the '924 patent but took deliberate actions to
3 avoid learning of those facts, as set forth above.

4 312. Huawei contributorily infringes at least claims 1 and 5 of the '924 patent by
5 providing the Accused UMTS Products and/or software or hardware components thereof, that
6 embody a material part of the claimed inventions of the '924 patent, that are known by Huawei to
7 be specially made or adapted for use in an infringing manner, and are not staple articles with
8 substantial non-infringing uses. The Accused UMTS Products are specially designed to infringe
9 at least claims 1 and 5 of the '924 patent, and their accused components have no substantial non-
10 infringing uses.

11 313. Samsung is entitled to recover from Huawei all damages that Samsung has
12 sustained as a result of Huawei's infringement of the '924 patent, including without limitation no
13 less than a reasonable royalty.

14 COUNT XII

15 (Antitrust Monopolization In Violation Of Section 2 Of The Sherman Act)

16 A. Introduction

17 314. Samsung re-alleges and incorporates by reference the allegations set forth in the
18 foregoing paragraphs.

19 315. This is an action for antitrust monopolization in violation of Section 2 of the
20 Sherman Act.

21 316. As a member of ETSI and an active participant in 3G and 4G consensus
22 standardization efforts through the 3GPP, Huawei was obligated to comply with the ETSI IPR
23 Policy. That policy requires the owner of patents that might be essential to a standard to file an
24 IPR disclosure statement that among other things contains an irrevocable commitment to be
25 prepared to license the disclosed IPRs on FRAND terms and conditions to those who implement
26 the relevant standards. Over time, to secure inclusion of its own proposed technology in the
27 evolving 3G and 4G standards, as well as other technology allegedly covered by its patents,
28 Huawei submitted IPR Disclosure Statements in which it promised to license its patents on

1 FRAND terms and conditions. As a result of Huawei's IPR disclosures, its patented technology
2 was allegedly incorporated into the standards and other alternative technologies that might
3 otherwise have been considered for inclusion in the standard were not adopted.

4 317. Huawei's promises to license its allegedly essential patents on FRAND terms and
5 conditions were intentionally false. Huawei has no intention of licensing its allegedly essential
6 patents on FRAND terms and conditions. [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED] Huawei chose to file this action as well as

14 eight actions in China on its declared essential patents. Although Huawei does not seek an
15 injunction in this Court for Samsung's alleged infringement of these allegedly essential patents,
16 the only relief Huawei seeks in China, which it presumably believes will be a favorable home
17 forum, are injunctions against Samsung. Thus, Huawei hopes to use to its advantage the pending
18 threat of injunctions in China, where Samsung not only sells smartphones and other accused
19 devices, but manufactures a large portion of the smartphones and other devices that it sells in the
20 United States and other parts of the world.

21 318. As a result of the alleged incorporation of its patented technology in the 3G and 4G
22 standards (namely the declared essential patents asserted here and in the China actions), Huawei
23 has monopoly power in the markets for those technologies. As a result of its alleged incorporation
24 in the standards, this technology is not interchangeable with or substitutable for other technologies
25 and those who comply with the 3G and 4G standards are locked in to those technologies. As a
26 result, Huawei has the power to extract supra-competitive prices for licenses for those
27 technologies, and [REDACTED]

28

1 [REDACTED]. Thus, Huawei has a dominant market share in the markets for these
2 technologies and the markets have significant barriers to entry.

3 319. Huawei has obtained and maintained its market power in these technology markets
4 willfully, and not as a consequence of a superior product, business acumen, or historic accident.
5 Huawei excluded competition through its intentional false promise to license the relevant
6 technologies on FRAND terms, which ETSI and its members, including Samsung, relied on, in
7 choosing to incorporate standards-compliant technology related to Huawei's allegedly patented
8 technology in the standards. Huawei's deceptive conduct induced 3GPP and ETSI, through the
9 voluntary consensus driven processes they use, to incorporate technology into the 3G and 4G
10 standards that they would not have absent a FRAND commitment.

11 320. Huawei's actions show it has never intended to comply with its promises to license
12 its allegedly essential patents on FRAND terms and conditions. Huawei has refused to engage
13 with Samsung's good faith efforts to determine fair and reasonable terms, and instead has [REDACTED]
14 [REDACTED] In addition, to help
15 obtain additional licensing leverage over Samsung, Huawei brought actions in the Chinese
16 courts—actions Huawei conspicuously failed to mention in its Complaint—in which the only
17 relief it seeks for Samsung's alleged infringement of its SEPs are injunctions.

18 321. In order to defend itself from Huawei's improper actions, Samsung responded by
19 filing infringement actions in China, reciprocally seeking injunctive relief to level the playing
20 field.

21 322. [REDACTED]
22 [REDACTED]
23 [REDACTED]

24 323. [REDACTED]
25 [REDACTED]
26 [REDACTED]
27 [REDACTED]

28 Having left Samsung with no choice but to avail itself of its judicial rights in response, Huawei is

1 further attempting to cover up its patent hold-up by depriving Samsung of its judicial rights or
2 otherwise portraying Samsung as the bad actor for its refusal to capitulate to its unfair demands.

3 324. Taken together, these anticompetitive acts are an abuse of Huawei's monopoly
4 power in the relevant worldwide markets and establish a violation of Section 2 of the Sherman
5 Act.

6 **B. Mobile Standards and the FRAND Commitment**

7 325. Industry standards play an important role in the worldwide economy.

8 326. Industry standards benefit everyone by protecting public health and safety and
9 promoting efficient resource allocation and production,

10 327. Industry standards promote interoperability.

11 328. Interoperability can reduce cost for suppliers by allowing a single product to be
12 sold to multiple purchasers in larger volumes and wider distributions.

13 329. Interoperability is also beneficial for consumers because they can purchase
14 products from multiple suppliers who compete with one another.

15 330. Industry standards are typically drafted by members of a standard setting
16 organization ("SSO") as a matter of consensus.

17 331. In the telecommunications industry, many players, including carriers, handset
18 manufacturers, and chipset manufacturers, among others, participate in the development of
19 industry standards to achieve interoperability for mobile devices including cellular telephones.

20 332. Mobile standards are promulgated by the Third Generation Platform Partnership
21 ("3GPP"), which operates as an umbrella organization for six SSOs around the world.

22 333. 3GPP produces and maintains the world's most widely adopted cellular standards
23 such as the Universal Mobile Telecommunications Standard ("UMTS") and Long Term Evolution
24 ("LTE") standard.

25 334. 3GPP develops these standards through an open voluntary consensus-based
26 process.

27
28

1 335. Mobile standards, such as for third-generation (“3G”) technologies and fourth
2 generation (“4G”) technologies, consist of voluminous sets of requirements and protocols that
3 must be followed for mobile devices to connect to the mobile network.

4 336. UMTS, which employs Wideband Code Division Multiple Access (“WCDMA”)
5 technology, is the third generation of the Global System for Mobile Communications (“GSM”)-
6 based networks.

7 337. LTE is the fourth generation network technology deployed by mobile operators on
8 both the GSM family and the CDMA technology paths.

9 338. The six SSOs that 3GPP comprises are referred to as organizational partners.

10 339. One of the six SSOs that helps to promulgate 3GPP 3G and 4G standards is the
11 European Telecommunications Standards Institute (“ETSI”).

12 340. Samsung employees participate in 3GPP standardization, at least in part, through
13 Samsung’s membership in ETSI.

14 341. On information and belief, Huawei employees participate in 3GPP standardization,
15 at least in part, through Huawei’s membership in ETSI.

16 342. ETSI’s objective is to create standards that are based on solutions that best meet the
17 technical objectives of the European telecommunications sector.

18 343. ETSI recognizes that standards rely on technical contributions from various sources
19 that may contain patented technologies and other protected rights which are commonly known as
20 Intellectual Property Rights (“IPRs”).

21 344. Participants in SSOs, like ETSI and 3GPP, propose technologies for incorporation
22 into an industry technical standard and make a consensus-based decision in light of the inherent
23 value and the technical and commercial merit of the proposed technologies, along with other
24 considerations.

25 345. Because standardization promotes a market-wide use of SEPs, patent owners are
26 incentivized to propose technologies covered by their patents rights such that every implementer
27 who wishes to utilize interoperability must take a license to their patents to avoid infringement
28 liabilities.

1 346. In exchange for having its technology adopted into an industry standard and
2 implemented across different manufacturers' products for interoperability, a SEP owner may be
3 required to voluntarily contract away certain rights that it would have otherwise enjoyed, such as
4 the right to refuse to license the technology to a willing licensee.

5 347. To preserve patent owners' incentives to participate in the standard development
6 process while preventing exploitation of SEPs against implementers of the standard, some SSOs
7 have IPR policies that condition the standardization of proprietary technology upon the patent
8 owner's explicit written promise to make the technology available to implementers of the relevant
9 standard on fair, reasonable, and non-discriminatory ("FRAND") terms and conditions.

10 348. It is important for SSOs to consider whether an entity that claims rights over a
11 proposed technology has committed to make that technology available on FRAND terms and
12 conditions.

13 349. IPR policies facilitate an informed comparison of the members of the SSOs and
14 their technologies.

15 350. IPR policies are part of the effort to preserve the competitive benefits of ex ante
16 technology competition.

17 351. The selection of a standard is, itself, the product of a competitive process.

18 352. To balance between the needs of standardization for public use in the field of
19 telecommunications and the rights of the owners of IPRs, ETSI has adopted an IPR Policy.

20 **C. ETSI's IPR Policy**

21 353. The ETSI IPR Policy seeks to reduce the risk to ETSI, its members, and others
22 applying ETSI standards that investment in the preparation, adoption and application of standards
23 could be wasted as a result of an essential IPR for a standard being unavailable.

24 354. Under the ETSI IPR Policy, an IPR is essential if it is not possible on technical (but
25 not commercial) grounds, taking into account normal technical practice and the state of the art
26 generally available at the time of standardization, to make, sell, lease, otherwise dispose of, repair,
27 use or operate equipment or methods that comply with a standard without infringing that IPR.

28

1 355. Such patents that are necessary to implement such standards are referred to as
2 “standard essential patents” (“SEPs”).

3 356. 3GPP does not have its own IPR Policy.

4 357. 3GPP instead requires that its individual members should declare, to their
5 Organizational Partners, including ETSI, any IPRs which they believe may be, or may become
6 essential, or potentially essential, to any work being conducted within 3GPP.

7 358. ETSI’s IPR Policy seeks to protect against members’ abuse of the monopoly power
8 that SEPs provide.

9 359. In addition to other limitations imposed by law, ETSI members must adhere to
10 ETSI’s IPR Policy.

11 360. The ETSI IPR Policy requires members to disclose on a timely, bona fide basis all
12 intellectual property rights that they are aware of and believe may be essential to a proposed ETSI
13 standard.

14 361. In particular, Clause 4.1 of the ETSI IPR Policy provides that: “each [ETSI]
15 MEMBER shall use its reasonable endeavours, in particular during the development of a
16 STANDARD or TECHNICAL SPECIFICATION where it participates, to inform ETSI of
17 ESSENTIAL IPRs in a timely fashion.”

18 362. In this regard, Clause 4.1 of the ETSI IPR Policy is believed to be materially the
19 same as earlier versions.

20 363. This obligation to disclose extends to members’ affiliates as well.

21 364. The ETSI IPR Policy further mandates that owners of potentially essential SEPs
22 make an irrevocable commitment to license the SEPs to those who implement the relevant
23 standard on FRAND terms and conditions.

24 365. Clause 6.1 of the ETSI IPR Policy states: “When an ESSENTIAL IPR relating to a
25 particular STANDARD or TECHNICAL SPECIFICATION is brought to the attention of ETSI,
26 the Director-General of ETSI shall immediately request the owner to give within three months an
27 irrevocable undertaking in writing that it is prepared to grant irrevocable licenses on fair,
28 reasonable and non-discriminatory (‘FRAND’) terms and conditions”

1 366. Clauses 6.1 lists “MANUFACTURE, including the right to make or have made
2 customized components and sub-systems to the licensee’s own design for use in
3 MANUFACTURE” as among the uses for which SEP holders must make mandatory FRAND
4 licensing commitments.

5 367. FRAND commitments, pursuant to Clause 6 of the ETSI IPR Policy, “shall be
6 interpreted as encumbrances that bind all successors-in-interest.”

7 368. Courts, regulators, and economists have made clear that to be effective, the
8 FRAND commitments in ETSI’s IPR policy should: (a) limit royalties to the value that the SEP(s)
9 had prior to inclusion in the ETSI standard and in light of other patented and unpatented
10 technology essential to the standard; (b) prohibit charging royalties that are higher based upon the
11 technology being written into the standard or that capture the value of the standard itself; and (c)
12 require non-discriminatory treatment of licensees and potential licensees.

13 369. FRAND commitments grant implementers the right to practice claimed essential
14 patents and preclude parties that make FRAND commitments from seeking to enjoin other parties
15 from practicing the relevant standard so long as those parties are willing to take licenses on
16 FRAND terms.

17 370. Participants in standards development rely on these contractual undertakings to
18 ensure that the widespread adoption of the standard will not be hindered by IPR holders seeking to
19 extract unreasonable royalties and terms from those implementing the standard.

20 371. If an ETSI participant is unwilling to commit to licensing its patents on FRAND
21 terms and conditions, the ETSI IPR Policy makes that a dispositive consideration in whether that
22 participant’s technologies should be considered for inclusion.

23 372. Clause 8.1.1 of the ETSI IPR Policy states: “Where prior to the publication of a
24 STANDARD or a TECHNICAL SPECIFICATION an IPR owner informs ETSI that it is not
25 prepared to license an IPR in respect of a STANDARD or TECHNICAL SPECIFICATION in
26 accordance with Clause 6.1 above, the General Assembly shall ... satisfy itself that a viable
27 alternative technology is available”
28

1 373. In those instances in which, in the opinion of the General Assembly, no viable
2 alternative technology exists, Clause 8.1.2 further provides that work on the standard or technical
3 specification at issue “shall cease.”

4 374. If, in contrast, an IPR owner commits to license an IPR that might be essential to a
5 standard on FRAND terms and conditions, then the IPR Policy permits the technology covered by
6 that IPR to be incorporated in the standard without resort to an alternative technology.

7 **D. Huawei’s Antitrust Violations**

8 375. Samsung asserts this counterclaim to enjoin Huawei’s abusive licensing practices
9 and unlawful monopolization in certain relevant markets for 3G and 4G mobile device
10 technologies.

11 376. Among other things, Samsung seeks an order enjoining Huawei from pursuing
12 injunctive relief for infringement of patents, including those asserted here and in the parallel
13 Chinese actions, that Huawei contends are essential to ETSI and 3GPP standards.

14 377. Samsung also seeks treble the damages caused by Huawei’s violations of Section 2
15 of the Sherman Act, 15 U.S.C. § 2.

16 378. Huawei has engaged in an unlawful scheme to acquire, exploit, and maintain
17 monopoly power over technology necessary for companies to make 3G and 4G mobile devices.

18 379. Huawei has pursued this scheme with false promises to make its technologies
19 available on FRAND terms and conditions.

20 380. Huawei’s scheme relies upon patents that, if its present contentions as to their
21 essentiality are true, have market power because they cover technology mandated by standards
22 that mobile devices and/or infrastructure must implement.

23 381. According to Huawei, these patents are necessarily infringed by practicing the
24 standard.

25 382. Huawei promised to license its SEPs on FRAND terms and conditions so that other
26 members of the SSO would include Huawei’s technologies in the standards.

27 383. Participants in 3G and 4G standardization, including ETSI members and Samsung,
28 reasonably relied on Huawei’s promises to license its essential patents on FRAND terms and

1 conditions to those who implement 3G and 4G standards in choosing to incorporate Huawei's
2 allegedly patented technology into 3G and 4G standards.

3 384. As a result of Huawei's promise to license its SEPs on FRAND terms and
4 conditions, Huawei's proposed technologies were allegedly adopted into the relevant 3G and 4G
5 standards.

6 385. As a result of Huawei's promise to license its SEPs on FRAND terms and
7 conditions, alternatives to Huawei's proposed technologies were not adopted into the relevant 3G
8 and 4G standards.

9 386. Huawei's promises to ETSI and its members to license its SEPs on FRAND terms
10 and conditions were intentionally false.

11 387. As a result of Huawei's false promises, Huawei manipulated the standard-setting
12 process to ensure that its patented technology was adopted and alternate technologies that might
13 otherwise have been considered were excluded.

14 388. As a result, participants in 3G and 4G standardization, including ETSI members
15 such as Samsung, relied to their detriment on Huawei's false promises to license Huawei's
16 essential patents on FRAND terms and conditions and have suffered harm.

17 389. By its acts, practices, and conduct, Huawei has unlawfully monopolized each of the
18 Relevant Technology Markets (*see* ¶¶ 469-480).

19 390. Huawei has monopoly power in the Relevant Technology Markets.

20 391. It is the sole supplier in those markets, has excluded all competition, and has the
21 power to charge supra-competitive prices and is in fact doing so.

22 392. In the course of, and after, deceiving the SSO and its members, Huawei has
23 exploited its unlawfully acquired power against Samsung by, among other things:

24 (a) refusing to honor the obligation to license its patents on FRAND terms and
25 conditions;

26 (b) [REDACTED] from companies, including
27 Samsung, that manufacture and sell 3G and 4G devices;
28

- 1 (c) [REDACTED]
 2 [REDACTED]
 3 [REDACTED]
 4 (d) [REDACTED] and thereby refusing to license its
 5 declared SEPs to a willing licensee; and
 6 (e) pursuing baseless demands for injunctive relief designed to increase
 7 Samsung's costs and thereby coerce Samsung to capitulate to Huawei's
 8 unreasonable, non-FRAND licensing demands.

9 393. Huawei relies on Samsung's FRAND licensing commitments in asking this Court
 10 to enjoin Samsung from seeking injunctive relief against Huawei and its affiliates in any
 11 jurisdiction with respect to any alleged infringement of any patent essential to 3GPP standards.

12 394. Yet simultaneous with its filing of this action, Huawei filed eight actions against
 13 Samsung in China based on Huawei's declared essential patents, seeking only injunctions as relief
 14 for Samsung's alleged infringement (the "Chinese actions").

15 395. The eight Chinese declared-essential patents that Huawei asserted against Samsung
 16 are 200810091957.6, 201110269715.3, 200610058405.6, 200810091433.7, 200880008361.3,
 17 201010137731.2, 201010146531.3, and 201110264130.2.

18 396. Each of these patents, as well as the declared essential patents asserted by Huawei
 19 in this action, defines a separate relevant Technology Market that encompasses the worldwide
 20 market for telecommunication devices.

21 397. In the Chinese actions based on its declared essential patents, Huawei does not seek
 22 damages for the alleged patent infringement.

23 398. The only relief Huawei seeks in the Chinese actions for Samsung's alleged
 24 infringement is injunctions.

25 399. Huawei's seeking in the Chinese actions of injunctions against Samsung's
 26 manufacture, sale, and offer for sale of mobile devices based on Huawei's declared essential
 27 patents is a breach of Huawei's irrevocable contractual commitment to license such patents to
 28 Samsung and other implementers of 3G and 4G standards.

1 400. On information and belief, Huawei's objective is not necessarily to secure an
2 injunction against Samsung, but rather to leverage the *threat* of the injunctions against Samsung,
3 whose ability to compete in the U.S. depends on uninterrupted supply of devices from its
4 manufacturing operations in China, with the goal of extracting excessive non-FRAND royalties
5 from Samsung.

6 401. Huawei's actions have injured competition by excluding alternate technologies and
7 imposed unjustified costs on Samsung and other companies that are consumers of the
8 technologies, resulting in diminished incentive to develop standard-compliant products and higher
9 prices to customers to whom the increased cost is passed along.

10 402. Absent Huawei's wrongful conduct, which resulted in alternate technologies being
11 excluded from the relevant standards, Samsung would have been able to obtain access to
12 necessary technology in the Relevant Technology Markets on fair, reasonable and non-
13 discriminatory terms.

14 403. Therefore, to remedy harms already inflicted and to prevent further harm to
15 Samsung's business and property, including its line of mobile devices, and further harm to
16 competition more generally in the Relevant Technology Markets, Samsung brings this action for
17 treble damages, declaratory relief, and injunctive relief under Sections 4 and 16 of the Clayton
18 Act, 15 U.S.C. §§ 15, 26.

19 **E. Patent Hold-Up And Royalty Stacking**

20 404. Mobile telephones and other mobile devices, including those manufactured and
21 sold by Samsung, must comply with the technical standards promulgated by ETSI in conjunction
22 with 3GPP, which promulgate mobile standards as drafted by their members acting through
23 consensus.

24 405. By creating these standards, 3GPP participants choose which technologies will be
25 available to consumers and which technologies will be excluded.

26 406. Mobile devices that do not conform to the adopted standards will not work with
27 network infrastructure equipment.

28

1 407. Mobile devices that do not use the technologies specified in the standard thus have
2 little, if any, market value, regardless of technical merit.

3 408. Once 3GPP participants select a technology for a particular function in a standard
4 that becomes widely employed, alternative technologies that could have performed that function
5 (or alternative functions) are effectively excluded.

6 409. Likewise, 3GPP mobile standards erect a substantial barrier to innovation in
7 alternate technologies.

8 410. Mobile device makers are “locked-in” to the standard-specified technology,
9 regardless of its short or long term merits, and are limited in their ability to innovate or use
10 alternative technologies.

11 411. The 3GPP standards at issue here arise from the collaboration of competitors,
12 including telecommunications companies, equipment and infrastructure manufacturers, and other
13 interested parties.

14 412. Much of each 3G and 4G standard is built on the technology of prior generations of
15 standards and is in the public domain, not covered by any patents.

16 413. However, some of the technologies included in the standards may be covered by
17 patents. If the standard specifies the use of particular technology that is covered by patents, then
18 devices that are in compliance with the standard infringe those SEPs.

19 414. Because a device that is in compliance with the standard has to practice each and
20 every SEP, the owners of SEPs—even the owner of just one SEP—can, unless subjected to a
21 binding FRAND undertaking, demand and obtain exorbitant royalties for the use of its patents, far
22 in excess of the value, if any, of its patented technology independent of its inclusion in the
23 standard.

24 415. If unwilling to pay such excessive license prices, device makers face the risk of
25 being foreclosed from using any portion of the standard, including the unpatented and public
26 domain technologies, and this threat of foreclosure, if left unchecked, puts a manufacturer’s
27 investment at risk.

28

1 416. The exploitation of SEPs to extract unreasonable or discriminatory royalties is
2 referred to as patent “hold-up.”

3 417. Patent hold-up harms competition and impedes implementation of standards and
4 any consumer benefits that flow from widespread adoption of the standard. The requirement that
5 SEPs be licensed on FRAND terms is imposed to curb this potential for anticompetitive abuse and
6 its effects.

7 418. The anticompetitive effects of hold-up are magnified in the context of the 3G and
8 4G standards, where there are thousands of SEPs held by many different patent holders.

9 419. The cumulative royalty burden required to satisfy all SEP holders is referred to as
10 royalty stacking.

11 420. To avoid the anticompetitive consequences of royalty stacking, a SEP holder is
12 limited to the value of its SEPs.

13 421. The SEP holder is prohibited from charging a premium based on having the
14 technology covered by the SEP written into the standard or from the value of the standard itself.

15 422. Likewise, because the total royalty must be reasonable, the demands of any
16 individual SEP owner must be assessed in light of the total number of SEPs included in the
17 standard.

18 423. ETSI has implemented an IPR Policy for the various standards it promulgates.

19 424. During all times relevant to these allegations, Huawei has been a member of ETSI.

20 425. Huawei actively participated in 3GPP’s development of the 3G and 4G standards.

21 426. As a result of its membership and active participation in the standardization
22 process, Huawei was and is bound by the ETSI Rules of Procedure, including the ETSI IPR
23 Policy.

24 427. On information and belief, Huawei understood that the consequence of a refusal to
25 commit to license its declared SEPs on FRAND terms pursuant to Clause 6.1 of the ETSI IPR
26 Policy would be the exclusion of its patented technologies from the 3G and 4G standards.

27 428. As was required by the ETSI IPR Policy, Huawei submitted declarations to ETSI
28 promising to license its SEPs on FRAND terms.

1 429. Although ETSI does not specifically define what FRAND terms mean, some
2 generally accepted principles have been recognized by participants in the industry.

3 430. FRAND licenses should be entered into freely as a result of a true bilateral
4 licensing negotiation.

5 431. The substantive terms and conditions of a FRAND license should reflect the
6 economic value of the patented technology.

7 432. The substantive terms and conditions of a FRAND license should also reflect the
8 license terms and conditions that could have been obtained in a competitive environment absent
9 the market power that the SEP owner obtains through incorporation of the patented technology in
10 the standard.

11 433. Royalty rates for SEPs should not be excessive and disproportionate to the value of
12 the SEPs.

13 434. A patent owner should be limited to a reasonable royalty on the economic value of
14 the technical contribution of its patented technology to the standard.

15 435. Royalty rates should reflect the intrinsic value of the technology rather than any
16 additional value conferred by the incorporation of that technology into the standard.

17 436. A patent owner is not entitled to the additional incremental value created purely by
18 the existence of the standard since that incremental value results from the market power the SEP
19 owner obtains as a result of the inclusion of its technology in the standard.

20 437. Smartphones and other telecommunications products need to comply with
21 numerous standards.

22 438. There are hundreds of SEPs for each standard, some of which relate to core features
23 of the standards and some of which relate only to peripheral features.

24 439. The technology covered by SEPs is not implemented out of choice because it is
25 viewed as being valuable or beneficial in itself, but is implemented out of necessity.

26 440. Modern smartphones and tablets integrate many functions that in the past were
27 commonly found in separate devices, such as the ability to take pictures and record video, browse
28 the internet, video chat, edit documents, etc.

1 441. Many of these functions and the components and software that make them possible
2 are designed to comply with standards unrelated to the standards at issue in these proceedings (i.e.
3 3G and 4G).

4 442. It is also accepted that an SEP owner should not seek an injunction against a
5 willing licensee.

6 443. FRAND license negotiations should not be affected by factors such as the threat of
7 obtaining or enforcing injunctions or other misuses of monopoly power.

8 444. It is also accepted that the threat of an injunction should not be used as a means to
9 extract higher royalties or other concessions from a locked-in implementer of a standard.

10 445. In determining FRAND rates, any additional incremental value that has been
11 obtained as a result of an explicit or implicit threat of an injunction must be discounted.

12 446. Although certain companies publish declared or headline rates, such rates are not
13 necessarily FRAND rates.

14 447. What is FRAND depends upon the circumstances of each particular licensing
15 negotiation.

16 448. Publicly quoted rates may be no more than maximum rates which form a starting
17 point for licensing negotiations.

18 449. That Huawei has published a maximum royalty rate of 1.5%, for example, does not
19 alone establish that such a rate is FRAND.

20 450. In addition, royalties for all the patents in a standard should not, when taken
21 together, produce a percentage that is not in itself a reasonable royalty burden for the use of the
22 standard.

23 451. A proper approach to determining a FRAND royalty should address the risk of
24 royalty stacking by considering the aggregate royalties that would apply if other SEP owners made
25 royalty demands of the potential licensee.

26 452. In or around July 2009, Ericsson made a public declaration that it expected "...a
27 reasonable maximum aggregate royalty level of 6-8%" for LTE-enabled handsets.
28

1 [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED]

5 455. As set forth herein, Huawei failed to inform ETSI that, contrary to its written
6 undertakings, it would in fact not comply with its FRAND commitments.

7 456. Huawei thus intentionally made false promises to license on FRAND terms and
8 conditions in order to deceive ETSI members into incorporating its technologies.

9 457. In reliance on Huawei's intentional false promise, participants at ETSI included
10 Huawei's technologies into the 3G and 4G standards.

11 458. In addition to providing Huawei with the power flowing from the inclusion of its
12 patented technologies in the ETSI standards, Huawei's false promises excluded alternate
13 technology from incorporation in the standard.

14 **F. Relevant Technology Markets**

15 459. For purposes of Samsung's antitrust claim, the relevant markets are the markets for
16 technologies covered by the declared essential Huawei patents issued in the United States and
17 elsewhere that Huawei has asserted against Samsung in litigation in the United States and China
18 against products that implement the 3G and 4G mobile standards (the "Standards"), together with
19 all other alternative technologies to the Huawei patents that could have been used in the mobile
20 standards. Throughout, these are referred to collectively as the "Relevant Technology Markets"
21 and discussed in more detail below.

22 460. Once ETSI adopts technology for a mobile standard, the owner of each essential
23 patent used in that standard obtains monopoly power in a relevant technology market.

24 461. When patented technology is incorporated in a standard, adoption of the standard
25 eliminates alternatives to the patented technology, and companies wanting to market devices that
26 comply with the standard are locked in and must use the SEPs.

27 462. Huawei has submitted declarations of essentiality regarding many of its patents to
28 the Standards, and made undertakings to license those patents on FRAND terms.

1 463. Huawei has also relied on the alleged essentiality of its SEPs in its Complaint and
2 in the Chinese actions.

3 464. If Huawei's declarations are correct, and Samsung reserves the right to contend
4 they are not, then the markets encompassed within the Relevant Technology Markets can be
5 identified from Huawei's licensing declarations to ETSI and its Complaints.

6 465. Before the adoption of the Standards, competitors in the Relevant Technology
7 Markets included companies with technology capable of performing the same or equivalent
8 functions which could have been adopted by ETSI and its members.

9 466. Additional competitors include the companies that offered technologies that could
10 have been used in alternate mobile standards that were foreclosed once ETSI members adopted a
11 standard that included Huawei technologies.

12 467. Because of the lock-in effect described above, Huawei became the only
13 commercially viable seller inside and outside the United States in each of the Relevant
14 Technology Markets.

15 468. Once Huawei technology was adopted into the Standards, implementers such as
16 Samsung who invest an enormous amount of resources to utilize the Standards became locked into
17 practicing Huawei technology, and as a result alternatives to the patented technology no longer
18 restrain Huawei's ability to demand royalties far in excess of the value contributed to the standard
19 by its technology.

20 **G. Huawei's Unlawful Acquisition Of Monopoly Power Through Deceptive Promises**

21 469. Patents related to mobile device technology that is not included in the mobile
22 standards have no market power because the standards effectively dictate what technology must be
23 used and what technology will not be used.

24 470. Consequently, Huawei participated in the drafting and development of ETSI
25 Standards to ensure that the Standards as written included Huawei's patented technologies.

26 471. Huawei also has a powerful interest in obtaining as many patents as possible that
27 cover technologies adopted by the Standards.

28

472. Having a very large list of patents and patent applications to represent as being essential to ETSI Standards allows Huawei to put maximum pressure on prospective licensees—i.e., standard implementers—and to extract maximum royalties for licensing its patents.

473. As a member of ETSI and a participant in 3GPP standardization, Huawei had an opportunity to make intentional and deceptive promises in the standard-setting process to serve its own anticompetitive goals.

474. In conjunction with the adoption of the Standards, Huawei made submissions to the technical bodies within ETSI, declaring that certain of its patents or patent applications may be or become essential to the mobile device standards under consideration.

475. Huawei also purported to commit to license any such essential patents it held on FRAND terms and conditions.

476. For example, on March 4, 2009, by submission of an IPR Information Statement and Licensing Declaration signed by Guo Zhenpeng on behalf of Huawei, Huawei declared that it is “prepared to grant irrevocable licenses” under the terms and conditions in accordance with Clause 6.1 of the ETSI IPR Policy. *See* Exhibit 47.

477. Including the above example, Huawei submitted the following declarations, in which Huawei disclosed some but not all of the asserted patents, to ETSI, true correct copies of which are attached as exhibits:

Date	Signatory	Standard(s)	Exhibit No.
3/4/2009	Z. Guo	LTE, UMTS	47
10/15/2009	Z. Guo	LTE	48
7/1/2010	Z. Guo	LTE	49
7/6/2010	Z. Guo	UMTS	50
7/7/2010	Z. Guo	LTE	51
12/26/2010	J. Du	LTE	52
3/14/2011	X. Wang	SAES	53
1/9/2012	J. Du	3GPP-Release-10	54
7/5/2013	J. Du	3GPP, 3GPP-EUTRAN, 3GPP-radio, 3GPP-Release-13, 3GPP-UTRAN, MCC_3G_reporting	55

1 478. Huawei made these declarations to ensure that the 3G and 4G Standards (and
2 earlier mobile network standards) incorporated its technologies such that any manufacturers of
3 Standard-complaint devices would need a license to Huawei's claimed SEPs, as well as to exclude
4 alternative technologies.

5 479. While making the above declarations to ETSI, Huawei concealed its intent to,
6 among other things, charge supra-competitive royalty rates and demand discriminatory terms
7 unsupported by underlying information and to seek injunctive relief in China against a willing
8 licensee to gain unfair advantages in licensing negotiations, so that ETSI members would include
9 technologies Huawei claims to have patented.

10 480. Pursuant to the ETSI IPR Policy, work on the portions of the Standards at issue
11 would have ceased if Huawei had been truthful about its unwillingness to license on FRAND
12 terms and conditions. But for Huawei's deception, alternate technologies would have been adopted
13 by ETSI or no particular technology would have been specified.

14 **H. Huawei's Abuse and Attempted Maintenance Of Its Monopoly Power**

15 481. Huawei's licensing practices abuse its monopoly position by employing hold-up to
16 force Samsung to pay supra-competitive worldwide royalties on non-FRAND terms for rights to
17 Huawei's declared essential patents and enforcing monopolistic licensing demands through
18 seeking injunctions in China against willing licensees like Samsung in violation of its FRAND
19 commitments.

20 **1. Huawei Engaged In Anticompetitive Conduct By Attempting To Extort**
21 **Supra-Competitive Royalties In Breach Of Its FRAND Commitments.**

22 482. Consistent with its true intention to renege on its FRAND commitments after
23 locking in all implementers to its declared essential patents in the Relevant Technology Markets,
24 Huawei has in fact failed to offer FRAND license terms to Samsung, which at all times has been a
25 willing licensee.

26 [REDACTED]
27 [REDACTED]
28 [REDACTED]

1 [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED]
5 [REDACTED]
6 [REDACTED]
7 [REDACTED]
8 [REDACTED]
9 [REDACTED]
10 [REDACTED]
11 [REDACTED]
12 [REDACTED]
13 [REDACTED]
14 [REDACTED]
15 [REDACTED]
16 [REDACTED]
17 [REDACTED]
18 [REDACTED]
19 [REDACTED]
20 [REDACTED]
21 [REDACTED]
22 [REDACTED]
23 [REDACTED]
24 [REDACTED]
25 [REDACTED]
26 [REDACTED]
27 [REDACTED]
28 [REDACTED]

1 [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED]
5 [REDACTED]
6 [REDACTED]
7 [REDACTED]
8 [REDACTED]
9 [REDACTED]
10 [REDACTED]
11 [REDACTED]
12 [REDACTED]
13 [REDACTED]
14 [REDACTED]
15 [REDACTED]
16 [REDACTED]
17 [REDACTED]
18 [REDACTED]
19 [REDACTED]
20 [REDACTED]
21 [REDACTED]
22 [REDACTED]
23 [REDACTED]
24 [REDACTED]
25 [REDACTED]
26 [REDACTED]
27 [REDACTED]
28 [REDACTED]

Topic	Number of Publications
1	24
2	23
3	10
4	24
5	25
6	5
7	24
8	24
9	2
10	24
11	18
12	24
13	25
14	22
15	24
16	25
17	10
18	24
19	23
20	10
21	24

FRAND rate developed by Guangdong High Court of China in *Huawei v. InterDigital*, a case involving SEPs for 3G wireless communications.

24 [REDACTED] the Guangdong Court's determination setting a FRAND royalty rate for
25 InterDigital's declared essential patent portfolio as 0.019% [REDACTED]

26	
27	

1 [REDACTED]

2 [REDACTED]

3 [REDACTED]

4 [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 [REDACTED]

18 [REDACTED]

19 [REDACTED]

20 [REDACTED]

21 [REDACTED]

22 [REDACTED]

23 [REDACTED]

24 [REDACTED]

25 [REDACTED]

26 [REDACTED]

27 [REDACTED]

28 [REDACTED]

1 [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED]
5 [REDACTED]
6 [REDACTED]
7 [REDACTED]
8 [REDACTED]
9 [REDACTED]
10 [REDACTED]
11 [REDACTED]
12 [REDACTED]
13 [REDACTED]
14 [REDACTED]
15 [REDACTED]
16 [REDACTED]
17 [REDACTED]
18 [REDACTED]
19 [REDACTED]
20 [REDACTED]
21 [REDACTED]
22 [REDACTED]
23 [REDACTED]
24 [REDACTED]
25 [REDACTED]
26 [REDACTED]
27 [REDACTED]
28 [REDACTED]

[REDACTED], and Huawei's licensing conduct has thus subjected the Relevant Technology Markets to patent hold-up.

535. Huawei's abuse of its monopoly power contravenes its FRAND promises.

2. Huawei's Seeking of Injunctions In China Violates Its FRAND Commitments.

536. Huawei maintains its hold-up and enforces monopolistic licensing demands against Standards implementers like Samsung by threatening them with an injunctive relief that would prevent manufacturing and other activities in China and therefore disrupt the global supply chain for products that include Standards-compliant technology.

537. Such threats are a breach of Huawei's contractual commitments to ETSI members, including Samsung, that it would willingly license its essential patents to those who implement 3G and 4G standards on fair, reasonable, and non-discriminatory conditions.

1 542. In all of the eight actions filed in China over its declared essential patents, the sole
2 remedy Huawei seeks is an injunction to immediately enjoin Samsung from activities that
3 allegedly infringe upon its patent rights, including manufacturing.

4 543. However, in its Complaint filed before this Court, Huawei concealed the fact that it
5 was seeking sweeping injunctions in China at the same time.

6 544. In fact, Huawei asked this Court to “[e]njoin Samsung from seeking injunctive
7 relief against [Huawei] (including [it]s affiliates) in any jurisdiction with respect to any alleged
8 infringement of any patent essential to 3GPP standards.” *See* Complaint at 46.

9 545. Thus, Huawei has in effect requested this Court to enjoin Samsung from seeking
10 precisely the same kind of remedy it sought in the Chinese actions, the existence of which it
11 deceptively concealed from the Court.

12 546. Huawei’s Chinese litigation against Samsung, who was and is a willing licensee,
13 along with the attendant facts that demonstrate Huawei’s bad faith, is a breach of FRAND
14 commitments and anticompetitive conduct contrary to law.

15 547. By its contracts with ETSI, Huawei covenanted that it would negotiate with willing
16 licenses and also waived some of its petitioning rights, including the right to enforce its patents
17 until it offered to license on FRAND terms.

18 548. Huawei’s FRAND commitments were intended to guarantee that Huawei would
19 not attempt to keep would-be implementers from using its patented inventions, such as by seeking
20 an injunction in a foreign country, but would instead proffer licenses on FRAND terms consistent
21 with its commitment.

22 549. As an implementer of the Standards, Samsung is a third-party beneficiary of
23 Huawei’s contract with ETSI.

24 550. Regulators and courts have explained that the threat of an injunction gives an SEP
25 holder enormous hold-up leverage. *See* Exhibits 56 (U.S. DEP’T OF JUSTICE & U.S. PATENT
26 & TRADEMARK OFFICE, *Policy Statement On Remedies For Standards-Essential Patent*
27 *Subject To Voluntary F/Rand Commitments* (Jan. 8, 2013), available at
28 <http://www.justice.gov/atr/public/guidelines/290994.pdf>) and 57 (*Realtek Semiconductor Corp. v.*

1 *LSI Corp.*, 946 F. Supp. 2d 998, 1007 (N.D. Cal. 2013) (“the pending threat of an [injunctive
2 relief] gives [SEP holders] inherent bargaining power in any [F]RAND licensing negotiation that
3 may now take place.”)).

4 551. On information and belief, Huawei also understands that an SEP holder should not
5 seek an injunction against a willing licensee.

6 552. Yet, by seeking injunctive relief in China against Samsung’s manufacturing and
7 sales activities, Huawei breached its contractual FRAND obligations with ETSI, causing injuries
8 to Samsung as the third-party beneficiary of the contracts.

9 553. Huawei is not only imposing ongoing threats and enormous costs to Samsung but
10 also causing significant interference with Samsung’s efforts to grow its mobile telephone market
11 share and engage in fair competition with other manufacturers.

12 554. The anticompetitive concerns arising from the threat of injunction in Huawei’s
13 Chinese actions are particularly acute, given that Huawei is unfairly leveraging the fact that many
14 implementers of Standards, including Samsung, have manufacturing capacities concentrated in
15 China and are therefore disproportionately exposed to harms from the threat of injunction in
16 China.

17 555. A significant portion of Samsung’s products allegedly incorporating Huawei’s
18 declared essential patents and sold worldwide, including in the United States, are manufactured in
19 China.

20 556. The threat of injunctive relief in China, however remote, puts at risk the substantial
21 portion of the revenue and investment for all of the technology used in Samsung mobile devices,
22 not just the proportion that allegedly uses Huawei’s SEPs.

23 557. Also, the magnitude of the potential lost investment and revenue flowing from an
24 injunctive relief is so high that would-be licensees in Samsung’s position can be strong-armed into
25 submitting to Huawei’s excessive and discriminatory demands. Any loss of goodwill and
26 reputation that would result from disruption of manufacturing in China would be irreparable.

27 558. Huawei’s conduct therefore has a direct, substantial, and reasonably foreseeable
28 effect on the United States commerce.

1 559. Well-aware of the central role Chinese manufacturing plays in the U.S. supply
2 chain, Huawei is now using the threat of injunctive relief in China to extort a non-FRAND royalty
3 rate divorced from the intrinsic value of its technologies.

4 560. Moreover, given that Huawei has requested this Court to determine a worldwide
5 FRAND royalty rate that would have resolved the licensing efforts for both parties, Huawei had
6 no reason to file the Chinese actions other than to gain unfair and unreasonable leverage in
7 negotiations with Samsung.

8 561. Huawei's intent to cause anticompetitive harm is abundantly clear in light of the
9 inconsistency in the remedies it seeks in the U.S. and in China.

10 562. For purely defensive purposes, Samsung responded to Huawei's naked injunction
11 actions by filing its own infringement actions against Huawei in China over Samsung's SEPs.

12 563. In the defensive actions, Samsung reciprocally sought injunctive relief against
13 Huawei in China to level the playing field, but is willing to drop its injunction requests in China if
14 Huawei does the same.

15 [REDACTED]
16 [REDACTED]
17 [REDACTED]
18 [REDACTED]
19 [REDACTED]
20 [REDACTED]
21 566. [REDACTED] Huawei has refused to drop its injunctions or engage
22 in good faith negotiations for a worldwide FRAND cross-license

23 [REDACTED]
24 [REDACTED]
25 [REDACTED]
26 [REDACTED]
27 [REDACTED]
28 [REDACTED]

1 [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED]
5 [REDACTED]
6 [REDACTED]
7 [REDACTED]
8 [REDACTED]
9 [REDACTED]
10 [REDACTED]
11 [REDACTED]

12 **I. Antitrust Harm To Samsung And To Competition In The Relevant Technology**
13 **Markets**

14 573. Huawei has harmed competition in the Relevant Technology Markets by
15 intentionally making a deceptive promise to ETSI during the standard-setting process, inducing
16 ETSI to rely on that promise when including Huawei's technology in the Standards, and thereby
17 excluding alternative mobile technologies.

18 574. By intentionally making deceptive FRAND commitments prior to standardization
19 and then reneging on its FRAND commitments after the industry is locked into using its allegedly
20 patented technologies essential to the standard, Huawei has unlawfully monopolized each of the
21 Relevant Technology Markets.

22 575. As a result, Huawei is the sole supplier in the Relevant Technology Markets, has
23 excluded all competition, and has the power to charge supra-competitive prices.

24 576. Huawei's deception in the standard-setting process harmed competition also by
25 obscuring the costs of including its patented technologies in the Standards, increasing the
26 likelihood that its patent rights would be included and confer monopoly power on Huawei.

27 577. Had Huawei properly disclosed its true intent to demand non-FRAND, exorbitant
28 license terms from implementers with the threat of injunction in China to enjoin implementers'

1 manufacturing activities and cause disruption in the global supply chain, ETSI would have
2 included in the standard alternative technologies that could have been licensed on FRAND terms
3 or continued to evaluate them, during which time implementers would have been free to choose an
4 alternative technology.

5 578. As a direct and proximate consequence of Huawei's unlawful monopolization,
6 customers in the Relevant Technology Markets, such as Samsung, face higher costs for access to
7 mobile device technologies necessary for the manufacture of Standard-compliant products than
8 they would have paid in a competitive market.

9 579. The antitrust injury associated with Huawei's unlawful monopolization of the
10 Relevant Technology Markets also extends to consumers in the downstream market for mobile
11 devices, in the form of higher prices, reduced innovation, and more limited choice for such
12 Standard-compliant products.

13 580. The necessary result of raising costs to some competing manufacturers in the
14 mobile device marketplace and diverting resources and monies that otherwise would have fueled
15 additional innovation in mobile devices has been to limit consumer choices in complementary
16 mobile technologies and other technology used in mobile telephones and other devices.

17 581. Huawei has leverage over manufacturers of Standard-compliant products that it
18 would not possess but for its false promises to license on FRAND terms and its unlawful
19 acquisition of monopoly power in the Relevant Technology Markets.

20 582. Because of such leverage, manufacturers of Standard-compliant products, including
21 Samsung, must either capitulate to Huawei's supra-competitive licensing demands or face the
22 costs and risks of protracted patent litigation.

23 583. The antitrust injury attributable to Huawei's overall anticompetitive scheme thus
24 includes the litigation fees and costs necessary to avoid the payment of supra-competitive
25 licensing terms and exclusion from the marketplace for Standard-compliant products.

26 584. Huawei's seeking of injunctions in China against Samsung's manufacture and sale
27 of mobile devices violates its contractual obligations to license on FRAND terms and not enforce
28

1 its patent rights against a willing licensee and, if granted, will jeopardize Samsung's ability to
2 continue to compete in the cellular technologies market in the United States.

3 585. The costs, duration, and threat of the Chinese proceedings brought against Samsung
4 by Huawei are expected to be substantial and represent an additional cost to Samsung's mobile
5 device business.

6 586. In addition to subjecting Samsung to millions of dollars in attorneys' fees and other
7 costs of litigation, including discovery burdens imposed on Samsung's partners and customers, the
8 risk of an injunctive relief in China creates uncertainty as to Samsung's line of mobile devices.

9 587. Huawei's litigation tactics thus will not only cause Samsung antitrust damages in
10 the form of the substantial costs of litigation, but also threaten to erode customer loyalty, brand
11 recognition, and customer goodwill for Samsung's smartphone devices. Increased costs for
12 Samsung harm Samsung's sales, and by extension harm competition in the market for mobile
13 devices.

14 588. In the absence of the injunctive relief requested herein, there is a substantial threat
15 that Samsung will be forced to capitulate to Huawei's supra-competitive licensing demands.

16 589. The artificial imposition of higher costs on Samsung threatens further loss of
17 market share, as does the threat of an injunctive relief in China.

18 590. Whichever way Huawei exploits its unlawfully-acquired monopoly power, the
19 harm to Samsung is both imminent and irreparable, because market share once lost in the sale of
20 mobile devices may never be recovered.

21 **COUNT XIII**

22 **(Breach of Contract)**

23 591. Samsung repeats and incorporates by reference the allegations contained in the
24 preceding paragraphs as if fully set forth herein.

25 592. As a member of ETSI, and to comply with ETSI's IPR Policy, Huawei irrevocably
26 undertook a binding commitment to ETSI, ETSI members, and third parties that it would grant
27 irrevocable licenses to Huawei's Patents-in-Suit on FRAND terms and conditions. In particular,
28 Huawei submitted IPR Licensing Declaration forms, declaring, among other things:

1 To the extent that the IPR(s) disclosed in the attached IPR Information Statement Annex
2 are or become, and remain ESSENTIAL in respect of the ETSI Work Item, STANDARD
3 and/or TECHNICAL SPECIFICATION identified in the attached IPR Information
4 Statement Annex, the Declarant and/or its AFFILIATES are prepared to grant irrevocable
licences [sic] under this/these IPR(s) on terms and conditions which are in accordance with
Clause 6.1 of the ETSI IPR Policy.

5 593. When an ETSI member submits an IPR Licensing Declaration form identifying a
6 patent as a potentially Essential IPR, the contractual commitments made with regard to the
7 declared patent are irrevocable and permanent, even when the patent is later transferred or sold.

8 594. Each party with products practicing the standards promulgated by ETSI is an
9 intended third-party beneficiary and obtains the benefits of these contractual commitments.
10 Samsung, its suppliers, and its customers, are all intended third-party beneficiary of Huawei's
11 FRAND contractual obligations.

12 595. Huawei's ETSI membership and activities, including the declarations it made to
13 comply with ETSI's IPR policy for Huawei's Patents-in-Suit, created an express and/or implied
14 contract with ETSI and/or ETSI members, including an agreement Huawei would license those
15 patents on FRAND terms and conditions. ETSI's IPR Policy does not limit the right to obtain a
16 license on FRAND terms and conditions to ETSI members; third parties that are not ETSI
17 members also have the right to be granted licenses under those patents on FRAND terms and
18 conditions.

19 596. Huawei did not make an offer to license Huawei's Patents-in-Suit on FRAND
20 terms and conditions to Samsung before filing its Complaint for patent infringement and to date
21 has not done so. [REDACTED]

22 [REDACTED]
23 [REDACTED]
24 [REDACTED]
25 [REDACTED]. By failing to provide Samsung
26 with FRAND license terms, Huawei has breached its FRAND commitments.
27
28

1 C. Judgment be entered that Huawei has monopolized the Relevant Technology
2 Markets in violation of Section 2 of the Sherman Act, 15 U.S.C. § 2;

3 D. Judgment be entered that each asserted claim of Huawei's Patents-in-Suit is invalid
4 and/or unenforceable;

5 E. Judgment be entered that each of the asserted Huawei U.S. patents declared by it to
6 be essential to the Standards is unenforceable;

7 F. The Court grant Samsung an award of treble Samsung's damages, in an amount to
8 be proven at trial, caused by Huawei's monopolistic conduct;

9 G. The Court grant injunctive relief requiring that Huawei make available to Samsung
10 a license to all of its 3G and 4G SEPs on FRAND terms;

11 H. Judgment be entered that Samsung has not infringed, contributed to the
12 infringement of, or induced others to infringe, either directly or indirectly, any valid or enforceable
13 claims of Huawei's Patents-in-Suit, willfully or otherwise;

14 I. Judgment be entered awarding Samsung damages and pre-judgment and post-
15 judgment interest for Huawei's breaches of its FRAND obligations on Huawei's Patents-in-Suit;

16 J. Huawei be enjoined from seeking injunctive relief against Samsung (and its
17 affiliates) in any jurisdiction, including China, with respect to any alleged infringement of any
18 patent essential to the 3GPP standards;

19 K. Judgment be entered that Huawei has willfully infringed Samsung's patents,
20 awarding Samsung an amount of damages to be determined through trial by jury, together with
21 pre-judgment and post-judgment interest;

22 L. The Court grant Samsung ongoing royalties for all continued post-trial
23 infringement by Huawei;

24 M. The Court grant Samsung all reasonable attorneys' fees, experts' fees, and costs;
25 and

26 N. The Court grant Samsung such further relief as the Court deems proper and just.
27
28

DEMAND FOR JURY TRIAL

Counterclaim Plaintiff Samsung hereby demand trial by jury on all issues so trial raised by Huawei's Complaint or by Samsung's Answer, Affirmative Defenses, and Counterclaims.

DATED: August 22, 2016

Respectfully submitted,

QUINN EMANUEL URQUHART &
SULLIVAN, LLP

By /s/ Victoria F. Maroulis

Charles K. Verhoeven
Kevin P.B. Johnson
Victoria F. Maroulis
David A. Perlson

*Attorneys for Samsung Electronics Co., Ltd.,
Samsung Electronics America, Inc., and
Samsung Research America, Inc.*